

MARITIME HERITAGE MINNESOTA

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Mississippi River Aitkin County Survey Report

2010



This side and down imaging sonar survey of 104 miles of the Mississippi River in Aitkin County, MN was made possible in part by a grant from the Minnesota Historical and Cultural Grants program, also known as the Legacy Amendment, voted for and supported by the People of the State of Minnesota.

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THE DOCUMENTATION, CONSERVATION, AND PRESERVATION OF
MINNESOTA'S FINITE MARITIME CULTURAL RESOURCES

Acknowledgments

Maritime Heritage Minnesota thanks the People of Minnesota for their support of the Minnesota Historical and Cultural Grants, otherwise known as the Legacy Amendment; without the MHC grant MHM received to conduct this survey, the work could not have been completed. MHM would also like to acknowledge the Grants Office Staff at the Minnesota Historical Society who are always available, helpful, and encouraging. MHM also thanks Michael F. Kramer and Ardis and Jack Becklin for their substantial in-kind donations to this project. MHM also thanks Dallas and Shanon Olson for their in-kind donation. We'd like to extend our gratitude to the folks of Aitkin County for their hospitality, including Dick Hlidek, Terry and Marilyn Kullhem, Kelly Olson, and Greg Leach of the Aitkin County Historical Society.



**Mississippi River Aitkin County Survey
2010
Maritime Heritage Minnesota**

Introduction

Since the organization's founding in 2005, Maritime Heritage Minnesota (MHM) has held that a systematic remote sensing survey of the Mississippi River to locate possible nautical and underwater archaeological sites was overdue. In fact, every body of water in Minnesota would be served by a remote sensing survey; no Minnesota lake, river, or stream has ever been the subject of a systematic sonar survey designed to locate unknown archaeological sites. Some lakes have been the subject of remote sensing projects to locate specific known shipwrecks or suspected sites, but until the Mississippi River Aitkin County Survey, no project has ever been designed to thoroughly investigate the bottom of a body of water in Minnesota with the specific purpose to find unknown archaeological sites.

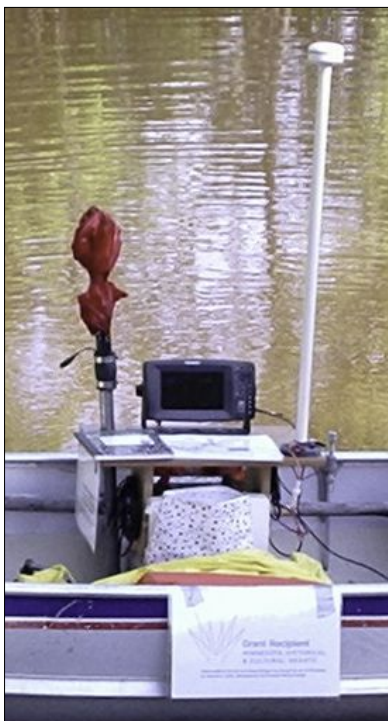
Minnesota has 674 miles – 28.6 % – of the 2,350 miles of the Mississippi River lying within its border. The Mississippi River Aitkin County Survey encompassed 104 miles – 15.4% – of these 674 miles, or the entirety of the river within the borders of Aitkin County and a bit of Itasca County when the river meandered over the border. MHM chose the Mississippi River in Aitkin County for this project because: 1. the only two known steamboat wrecks in the Mississippi River within Minnesota's borders lie within the specified 104 mile stretch of river in Aitkin County, the *Swan* and *Andy Gibson*; 2. there is the possibility that the remains of the steamboats *City of Aitkin/George H. Houghton*, *Lee*, *Walter Taylor*, and *Fawn*, as well as remnants of landing sites, piers, docks, personal launches, and flatboats, may be found here; 3. all previous maritime historical scholarship of Mississippi River steamboats that plied the "Upper Mississippi River" stopped at Minneapolis – the Mississippi Headwaters regions has been entirely ignored as if steamers did not run above the Twin Cities; 4. in the entire 2,350 mile length of the river outside of Minnesota, only 6 wrecks have been documented to any extent and only 24 are known to exist (one in Wisconsin, five in Arkansas, and 18 in Mississippi, of which only three are steamers and only two of them have been rudimentarily documented); and 5. this stretch of the river is nearly unchanged since steamers stopped running between Aitkin and Grand Rapids in 1921. Additionally, the US Army Corps of Engineers (USACE) ceased dredging operations in the early 20th Century, thus increasing the chances of locating submerged cultural resources that are at least partially intact.

The data produced during this survey provides MHM with numerous dive sites to investigate, hopefully augmenting the Mississippi River Headwaters Wreck Site List that currently contains the sternwheelers *Swan* (exposed parts were documented by the State Historic Preservation Office (SHPO) in 1996 and MHM briefly investigated the site in 2008 and 2009) and *Andy Gibson* (a unique partially dry nautical site whose low water exposed remains were documented by MHM in 2008, 2009, and 2010). The *Andy Gibson* wreck rests on a platform designed to prevent hogging, sagging, grounding, and excessive leaking of the vessel during her working life – the only site of this nature MHM is aware of anywhere in the world.

Lastly, this project will be used as a template and case study for other side and down imaging sonar surveys of the remaining miles of the Mississippi River, its substantial number of tributaries, the other large rivers within Minnesota, and several Minnesota lakes that saw significant waterborne traffic require examination as well. This project represents a first step that establishes an efficient and effective system that allows for the systematic survey of Minnesota's waterways for maritime, nautical, and underwater archaeological sites that have remained undocumented for too long.

Survey Methodology

MHM's initial concern was, of course, acquiring an appropriate and affordable side and down imaging sonar unit that would suit the ever – changing, shallow nature of the Mississippi River in Aitkin County. The unit chosen was a Humminbird 898c SI with a boat-mounted high and low frequency transducer. This sonar unit came on the market in March 2010, has accurate GPS, several screen modes including a split sonar/GPS choice, and is capable of recording all survey data onto a 16 gb memory card for later review. A significant feature of this unit is the lack of a towfish – any type of towed transducer would have been lost to any one of a thousand snags encountered in the river. The 898c SI transducer was designed to be bolted through a boat's transom; however, MHM's Christopher Olson adapted some hardware to allow the transducer to be attached through an oarlock with a removable mounting system, allowing flexibility and use with a variety of watercraft. Prior to commencing the Mississippi River Aitkin County Survey (MRACS), MHM conducted tests of the new sonar equipment on known wreck sites in Lake Minnetonka in order to experiment with the image range and depth ratios and high and low frequency transducer images.



Left: The sonar unit set – up on the research boat, including the GPS mast, umbrella for sun and rain, and the starboard transducer oarlock attachment.

Above: A close-up of the sonar screen.



Left: The research boat ready for survey at the Aitkin Campground Public Access.

Above: One of MHM's MHCG sign, attached to the boat during the work.

One of the most important considerations – and quite a basic one – in planning the MRACS was locating accessible boat launch sites throughout Aitkin County. The Minnesota Department of Natural Resources (DNR) has produced boater's guides for the whole of the river in Minnesota, and the two maps that covered our survey area were invaluable in locating public access boat launches – with one notable exception. MHM had no problems launching the 12 – foot aluminum survey boat at the public accesses at the Aitkin Campground, Waldeck, Bergland Park at Palisade, Wold's Ferry Crossing, the USACE Recreation Area at Big Sandy River, and at Jacobson Campground. Unfortunately, the Kimball Public Access – located between Aitkin and Waldeck – has not been maintained, seemingly for several years. MHM had to launch from Aitkin for an additional day, adding extra miles in “deadheading” to that day's survey.



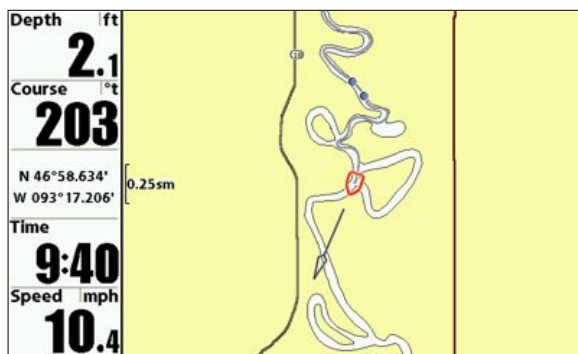
Left: Waldeck Public Access.

Below Left: The un-maintained Kimball Public Access.

Below Right: Deadheading.



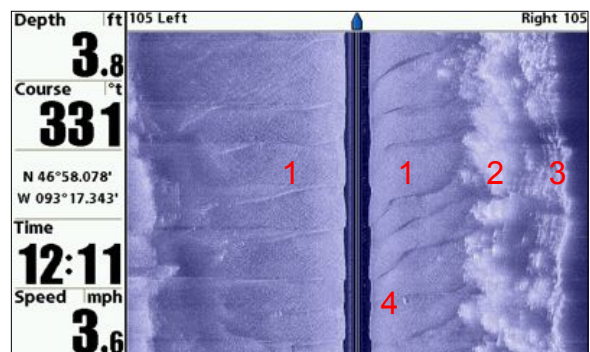
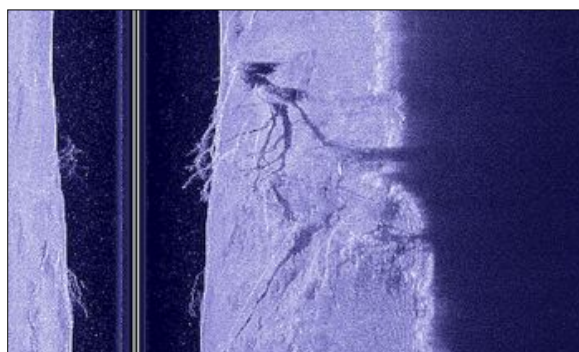
Initially, MHM planned to conduct the 104 mile survey in 11 days of various lengths covering between five and 20 miles a day – with deadheading distance taken into consideration – with an additional cushion of four days for bad weather and other unforeseen issues. In the end, MHM spent nine days conducting the survey, with a small portion of day 10 spent creating several additional images of the *Andy Gibson* wreck site. During any given day, MHM recorded several hours of sonar data – 30 hours 50 minutes in total – and noted 244 anomalies. Encountered were several areas of Class I rapids – Island Rapids, Moose Rapids, Scott’s Rapids, Noyes Rapids, Oxbow Rapids, the rapids at Verdon Landing, Crooked Rapids, and two sections of Pine Rapids – that were not too difficult to navigate. However, the survey boat did hit two boulders at Scott’s and Noye’s Rapids, outside of the boundaries of the rapids areas marked on maps, indicating the rapids are migrating a bit. The sonar unit permits the establishment of “waypoints,” numbers marked on the corresponding GPS map that allows MHM to call up data regarding each anomaly marked by a waypoint. Additionally, the snapshot function (with zooming capability) creates a picture of an anomaly on demand.



Screen shots of the sonar map option that not only indicates the research boat's location on the river but in relation to roads and towns.

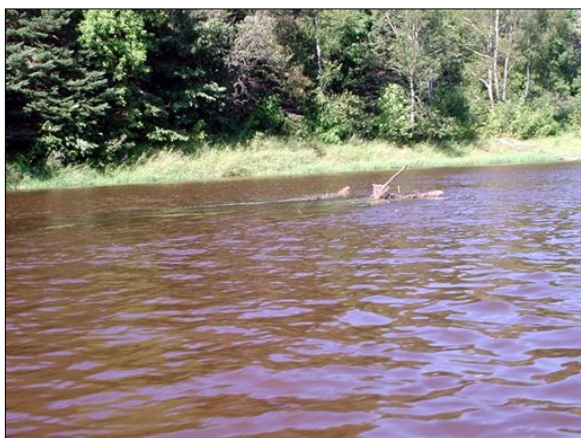
The Anomalies

Two hundred four of the 244 anomalies noted by MHM as waypoints, snapshots, and in the survey notebook were, after review, comprised of trees (snags of various configurations from complete trees with root balls to cut timber), silt deposits, ridges comprised of layers of small pebbles deposited during different water levels, boulders, and weeds.



Above Left: A tree with a root ball.

Above Right: A sonar image with: 1. layers of silt deposits; 2. weeds; 3. ridges of small pebbles; 4. a boulder.



Above Photos: Four examples of snags that protruded above the water and were avoidable.

MHM hit several snags and boulders that were never seen, including driving over a complete tree along its length in Jacobson.

Right: Ridges of small pebbles that are seen in sonar images; refer to #3 in the photo on the previous page.



Beyond the known nautical archaeological sites of *Swan* and *Andy Gibson*, MHM recognized three additional sites that warranted Minnesota Archaeological Site Forms. These new sites were assigned site numbers after MHM submitted the forms (Appendix A) to the Office of the State Archaeologist (OSA). These sites – the Sandy River Steamboat Crib (21-AK0117), the Mississippi Landing Logging Pier (21-AK0116), and the

Mississippi Landing Railroad Spur and Bridge Remains (21-AK0115) – were recognized immediately by MHM as archaeological sites since they are partially exposed above water (and in the river banks), even during the high water conditions MHM experienced during MRACS. The side imaging sonar proved useful in the rudimentary documentation of the three new sites, since sections of these archaeological remains are only evident underwater. The sonar images will be used as a guide to determine the exact boundaries of these sites during future documentation.

The 40 anomalies depicted in the following pages that MHM has determined deserve further investigation primarily suggest “boat-shaped” objects or rectangular flatboats, with a few having artificial – looking outlines but no sharp or square ends like a boat, and one anomaly suggests a pipe. MHM will investigate these anomalies by SCUBA in the near future if all goes as planned. The 898c SI records location (latitude and longitude), water depth, research boat speed, and course. When examining the sonar images on the following pages, keep in mind that the latitude/longitude seen on the sonar screen indicates the location of the research boat (the little boat icon at the top of the image). The 898c SI zoom function allowed MHM to center the unit’s cursor on the anomalies and in that way, determine its exact location. Also, the anomalies are listed from the border of Crow Wing County to the border of Itasca County, as if the boat is traveling upstream, which is the direction MHM always recorded the sonar data. But, because MHM started the survey in Aitkin and then traveled toward Crow Wing County, the anomaly numbers as listed are not in ascending order. Lastly, it must be remembered that the water depth indicated on the sonar images is for the day the image was recorded and does not reflect what the river level will be when these sites are investigated in the future.

1. Anomaly 49

Recorded: 8/14/2010

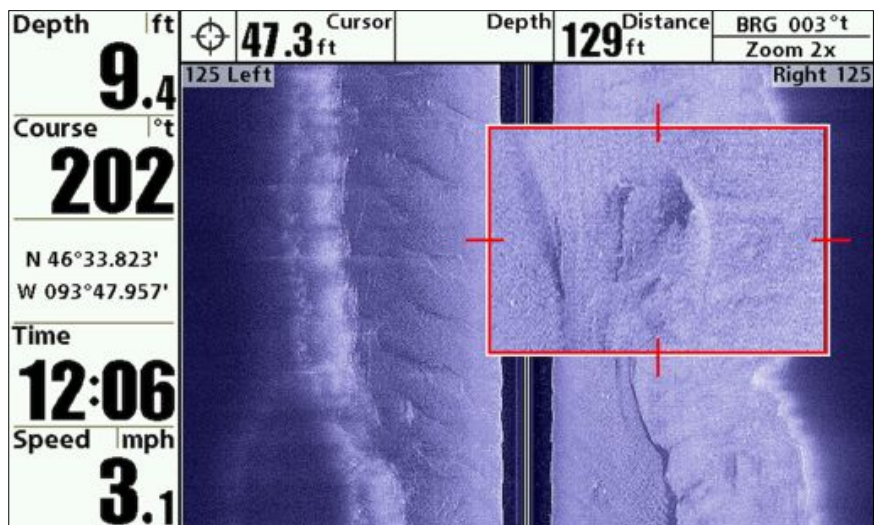
Identification: Feature

Depth: 9.1 Feet

Size: Approximately 39 feet

Location: West side of river, starboard side of boat traveling upstream

Analysis: Possible buried artifact, outline suggests silt accumulation around large object



2. Anomaly 55

Recorded: 8/14/2010

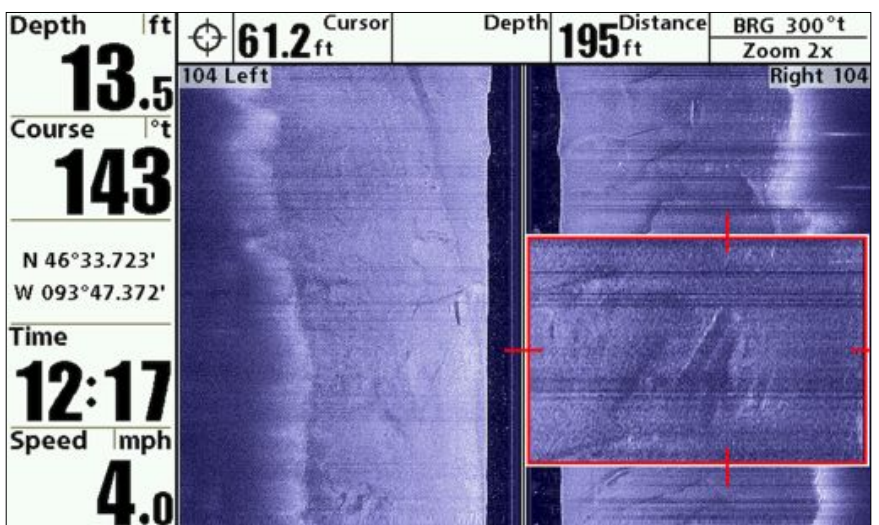
Identification: Rectangular Feature

Depth: 10.4 Feet

Size: Approximately 18 feet

Location: South side of river, starboard side of boat traveling upstream

Analysis: Possible buried artifact, outline suggests silt accumulation around large object with portions protruding above the river bottom



3. Anomaly 56

Recorded: 8/14/2010

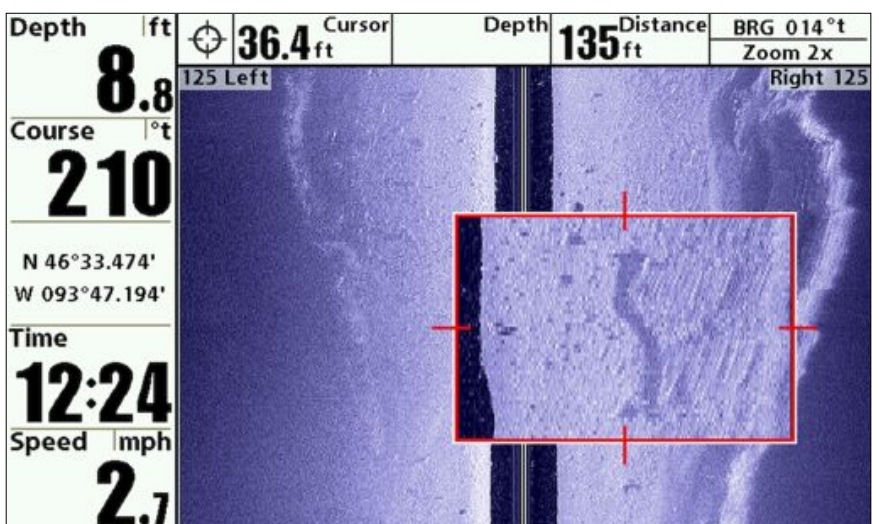
Identification: Feature, Possible Pipe

Depth: 9.4 Feet

Size: Approximately 25 feet

Location: West side of river, starboard side of boat traveling upstream

Analysis: Possible artifact, outline suggests a metal pipe or other long object



4. Anomaly 62

Recorded: 8/14/2010

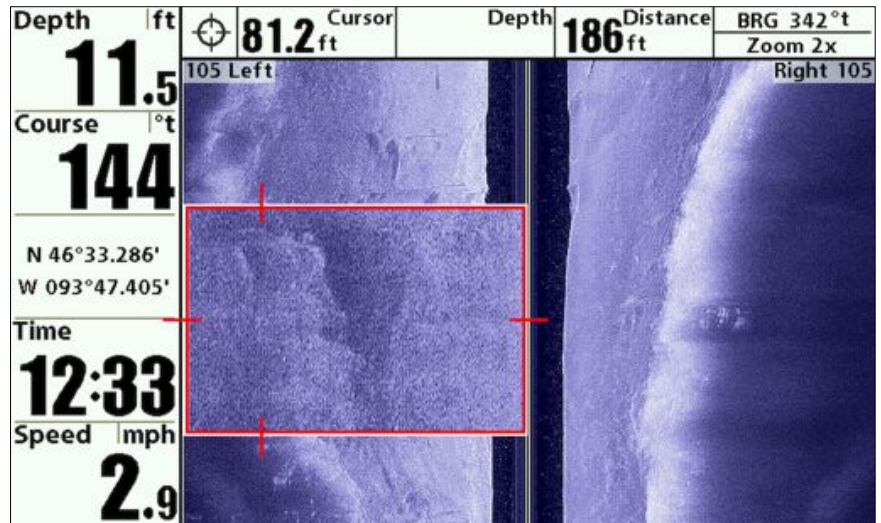
Identification: Rectangular Feature

Depth: 10.8 Feet

Size: Approximately 79 feet

Location: Northeast side of river, port side of boat traveling upstream

Analysis: Possible partially buried artifact with layers of silt covering it from the river bank



5. Anomaly 71

Recorded: 8/14/2010

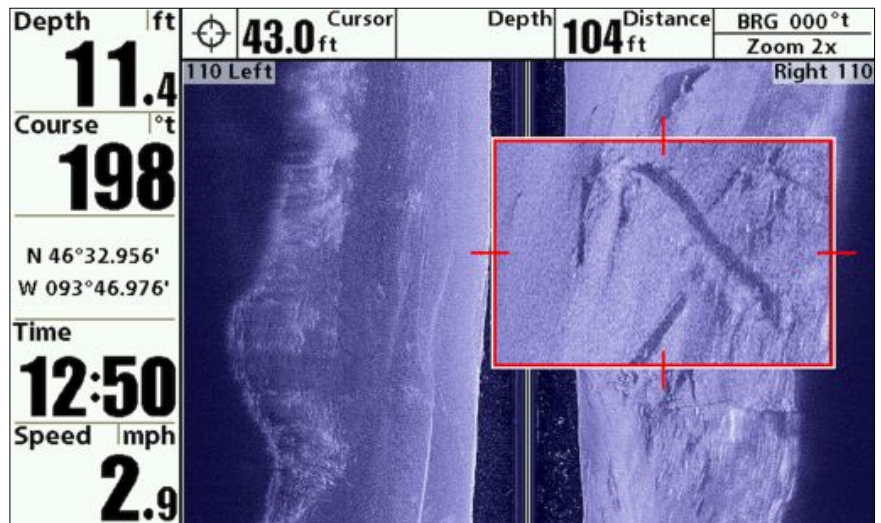
Identification: Boat Shaped Feature

Depth: 11.7 Feet

Size: Approximately 36 feet

Location: West side of river, starboard side of boat traveling upstream

Analysis: Possible partially buried artifact that resembles a boat lying considerably on its side



6. Anomaly 80

Recorded: 8/14/2010

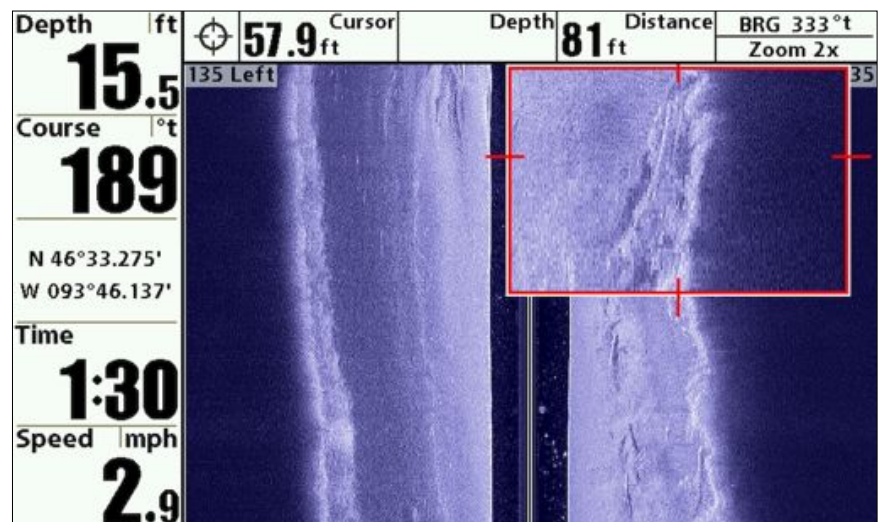
Identification: Rectangular Feature

Depth: River Bank

Size: Approximately 48 feet

Location: West side of river, starboard side of boat traveling upstream

Analysis: Possible partially buried artifact embedded partly in the river bank



7. Anomaly 82

Recorded: 8/14/2010

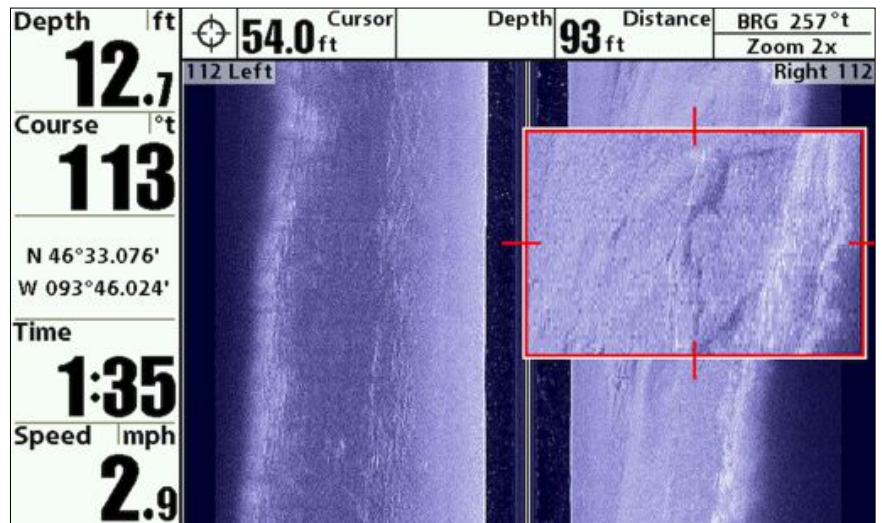
Identification: Boat Shaped Feature

Depth: River Bank

Size: Approximately 49 feet

Location: South side of river, starboard side of boat traveling upstream

Analysis: Possible partially buried artifact that resembles a boat partly embedded in the river bank



8. Anomaly 88

Recorded: 8/14/2010

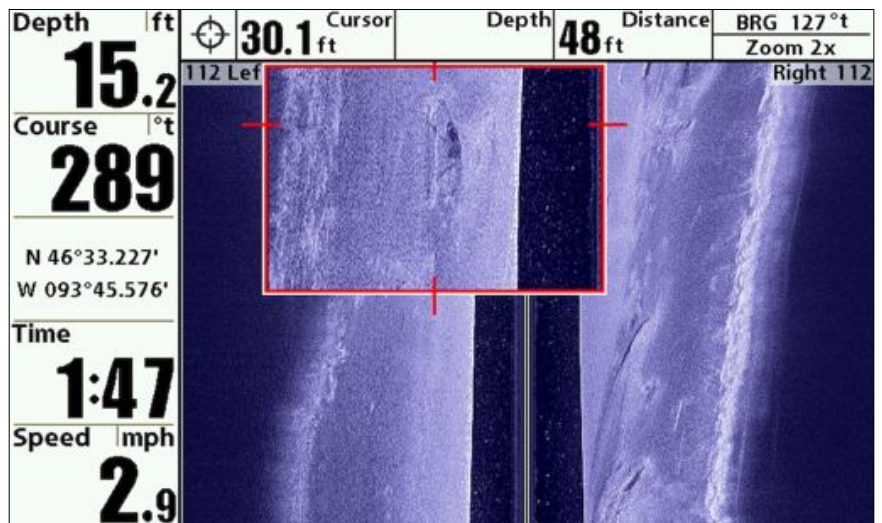
Identification: Boat Shaped Feature

Depth: 15.8 feet

Size: Approximately 15 feet

Location: South side of river, port side of boat traveling upstream

Analysis: Possible partially buried artifact that resembles a boat, possibly a small skiff or launch



9. Anomaly 96

Recorded: 8/14/2010

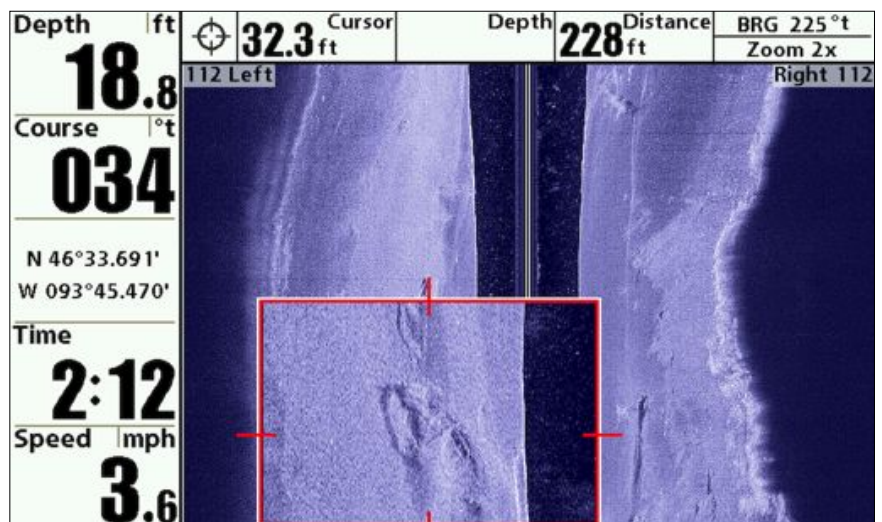
Identification: Boat Shaped Feature

Depth: 18 feet

Size: Approximately 16 x 47 feet

Location: Northwest side of river, port side of boat traveling upstream

Analysis: Possible partially buried artifact that resembles a boat, in the deepest part of the river channel



10. Anomaly 106

Recorded: 8/14/2010

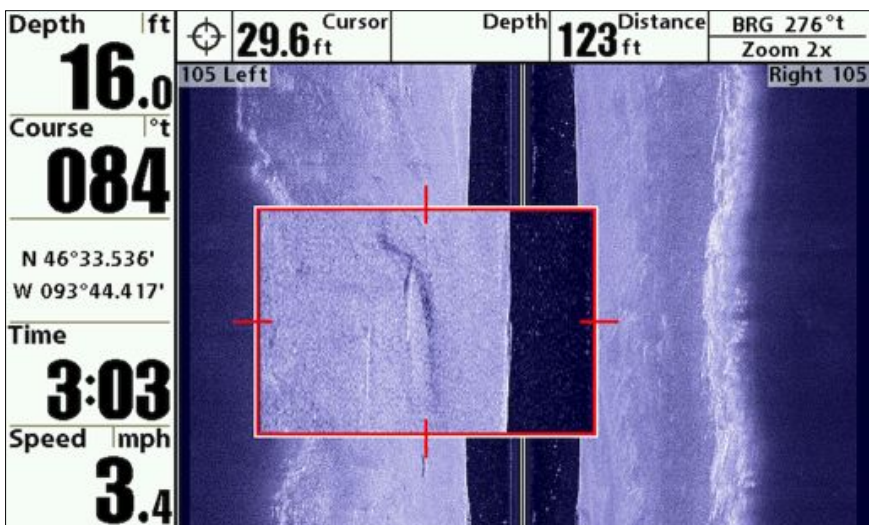
Identification: Boat Shaped Feature

Depth: 17 feet

Size: Approximately 4 x 11 feet

Location: North side of river, port side of boat traveling upstream

Analysis: Possible buried artifact whose outline resembles a boat, possibly a small skiff, in the deepest part of the river channel



11. Anomaly 9

Recorded: 8/12/2010

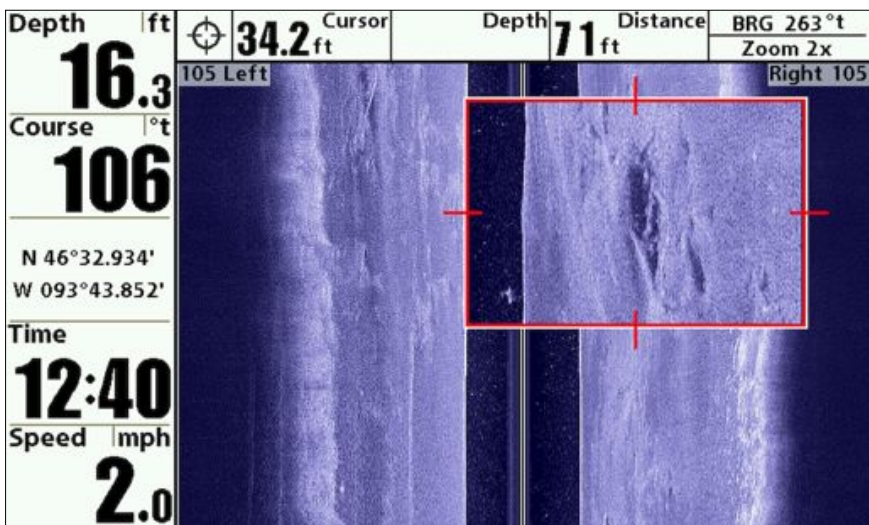
Identification: Boat Shaped Feature

Depth: 16.7 feet

Size: Approximately 20 feet

Location: South side of river, starboard side of boat traveling upstream

Analysis: Possible buried artifact whose outline resembles a boat, possibly a small skiff



12. Anomaly 11

Recorded: 8/12/2010

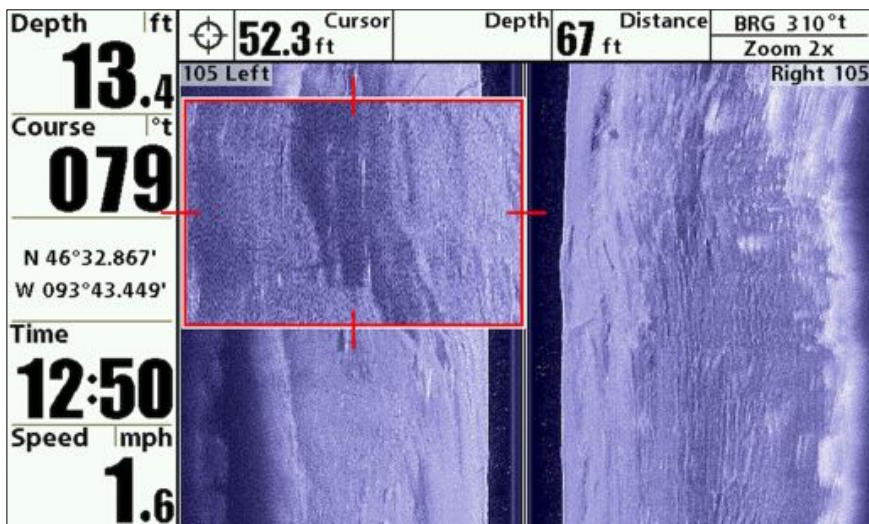
Identification: Rectangular Feature

Depth: 14.5 feet

Size: Approximately 28 feet

Location: North side of river, port side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a flatboat, probably embedded in a crevice



13. Anomaly 12

Recorded: 8/12/2010

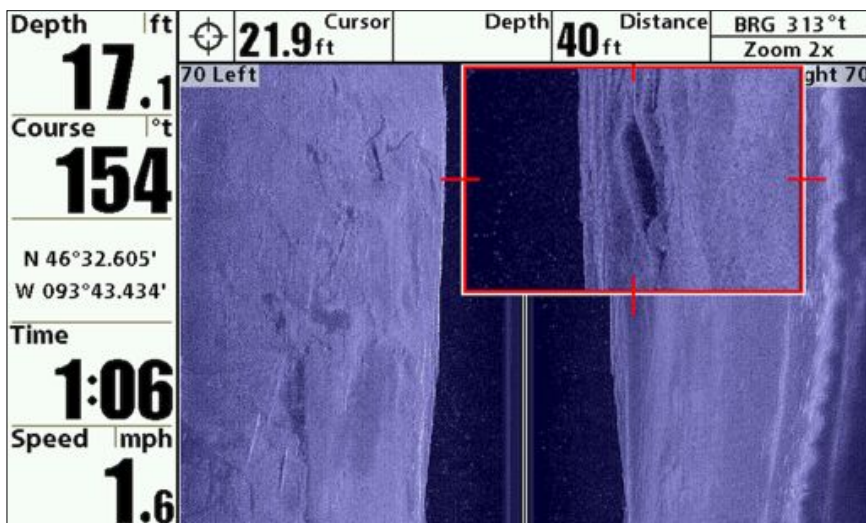
Identification: Boat Shaped Feature

Depth: 17 feet

Size: Approximately 11 feet

Location: West side of river, starboard side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a small boat, possibly a skiff and hollowed-out



14. Anomaly 13

Recorded: 8/12/2010

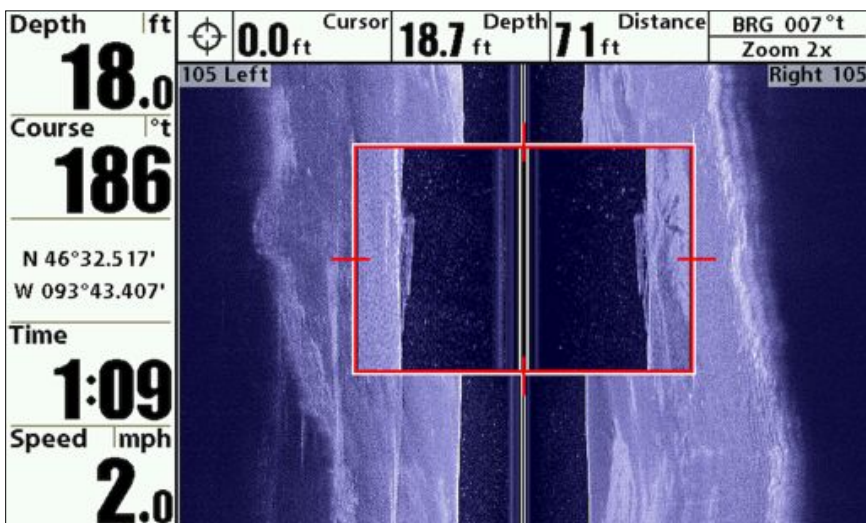
Identification: Rectangular Feature

Depth: 18.5 feet

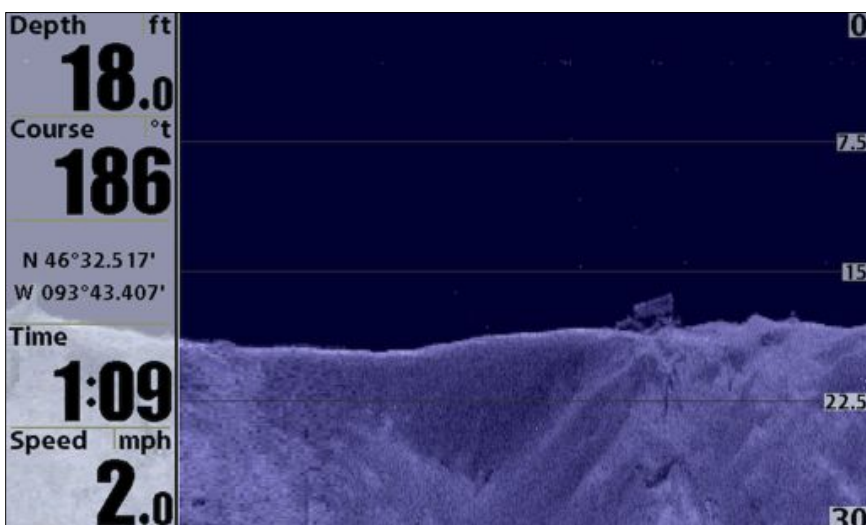
Size: Approximately 13 feet

Location: In middle of river channel, seen best in down image

Analysis: Possible artifact that resembles a pontoon



Down Image



15. Anomaly 15

Recorded: 8/12/2010

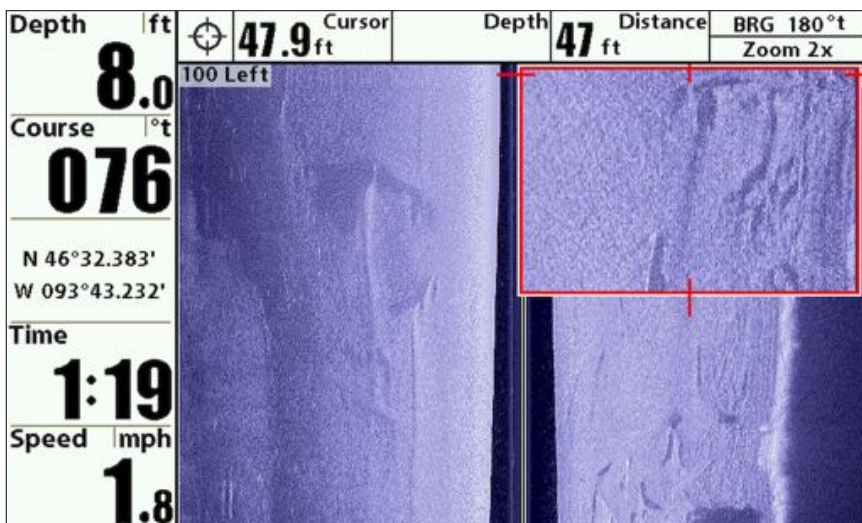
Identification: Rectangular Feature

Depth: 6.7 feet

Size: Approximately 40 feet

Location: South side of river, starboard side of boat traveling upstream

Analysis: Possible buried artifact whose outline resembles a flatboat



16. Site 1 – Andy Gibson

21-AK0109

Recorded: 8/12/2010

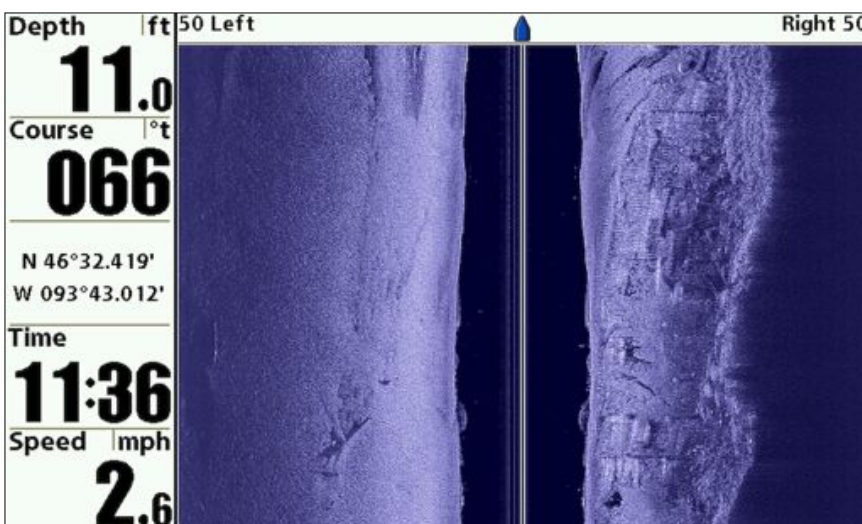
Identification: Steamboat Wreck

Depth: 11 feet

Size: Approximately 140 feet

Location: South side of river, starboard side of boat traveling upstream

Analysis: Areas of wreck site that are always underwater hold great promise, port cylinder timber may be *in situ*



17. Anomaly 17

Recorded: 8/12/2010

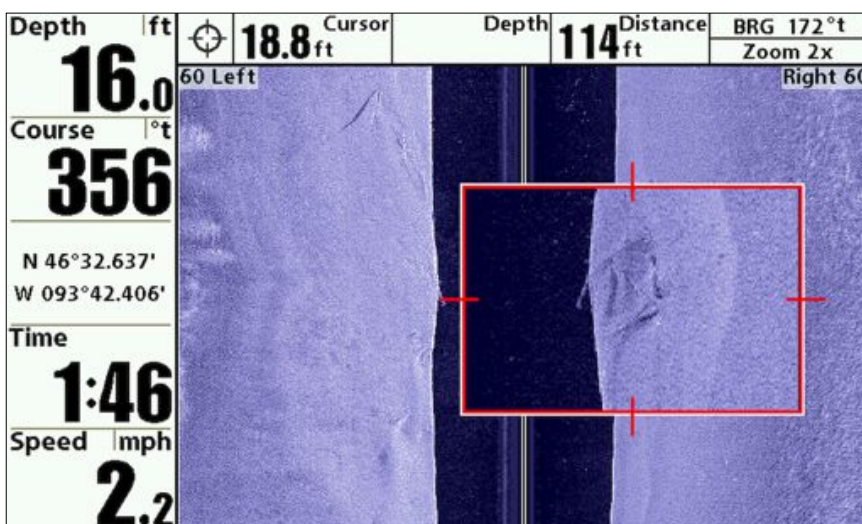
Identification: Rectangular Feature

Depth: 15.6 feet

Size: Approximately 20 feet

Location: East side of river, starboard side of boat traveling upstream

Analysis: Possible rectangular artifact partially buried in the river channel



18. Anomaly 19

Recorded: 8/12/2010

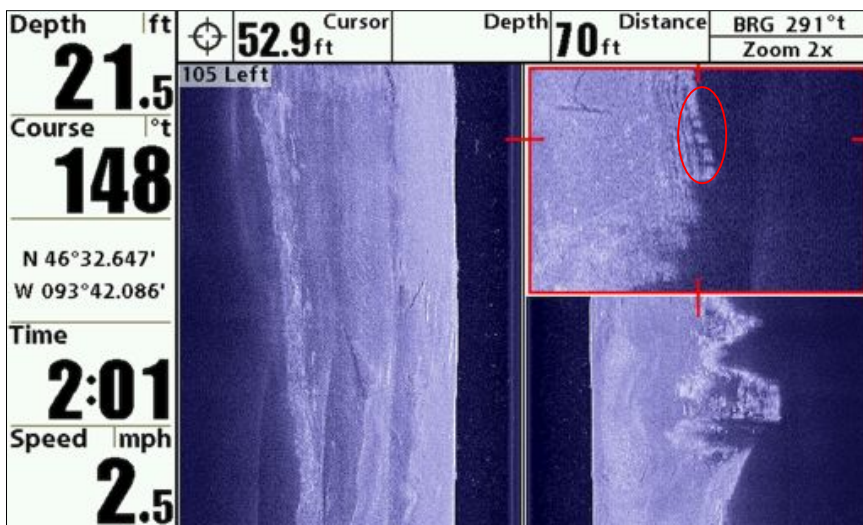
Identification: Possible Structure

Depth: River Bank

Size: Approximately 20 feet

Location: West side of river, starboard side of boat traveling upstream

Analysis: Possible boat or dock remains protruding from river bank in area where beams were exposed in 2008



19. Anomaly 20

Recorded: 8/12/2010

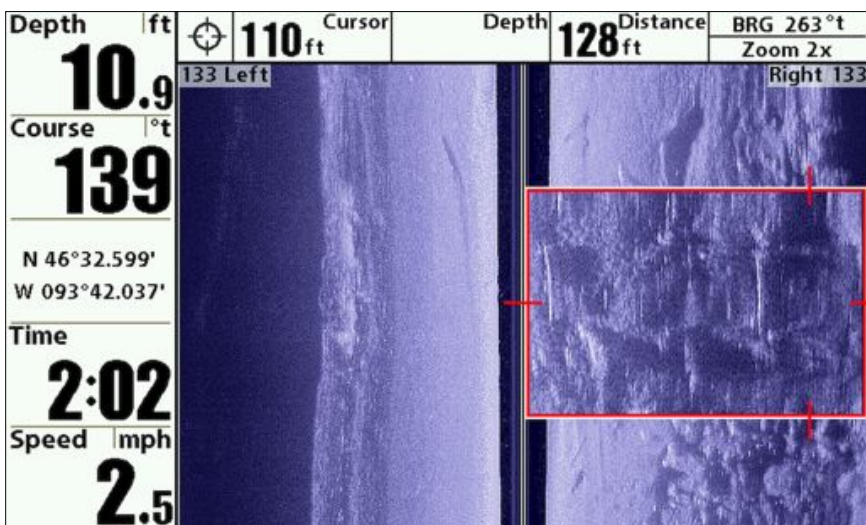
Identification: Rectangular Feature

Depth: 9.1 feet

Size: Approximately 41 feet

Location: Southwest side of river, starboard side of boat traveling upstream
46 32.553 n 093 42.013 w

Analysis: Feature resembles large timbers used in sternwheel construction, may be associated with Anomaly 21



20. Anomaly 21

Recorded: 8/12/2010

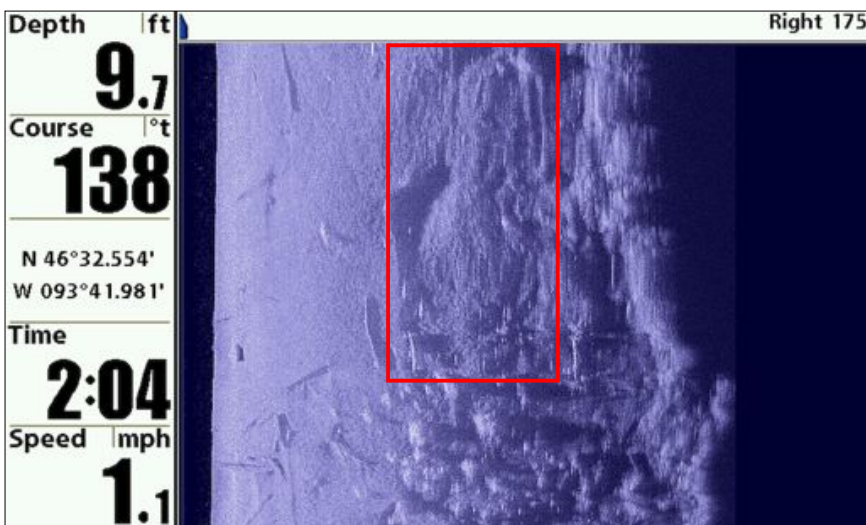
Identification: Boat Shaped Feature

Depth: 10 feet

Size: Approximately 50-70 feet

Location: Southwest side of river, starboard side of boat traveling upstream

Analysis: Possible buried artifact whose outline resembles a boat in the area where the steamer *Walter Taylor* was reportedly abandoned and covered in silt; might be associated with Anomaly 20



21. Site 2 – Swan

21-AK0084

Recorded: 8/12/2010

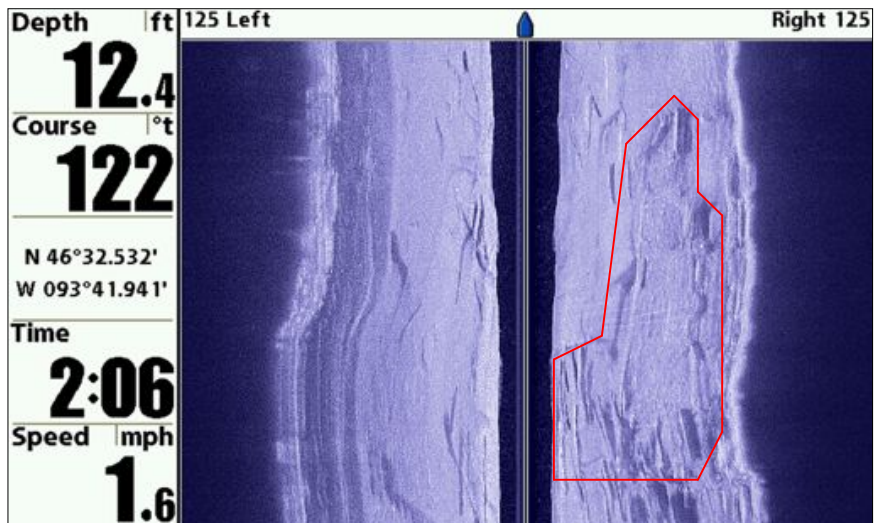
Identification: Steamboat Wreck

Depth: 13.4 feet

Size: Approximately 80 feet

Location: South side of river, starboard side of boat traveling upstream

Analysis: Wreck site has less detritus covering it than in 2008



22. Anomaly 118

Recorded: 8/15/2010

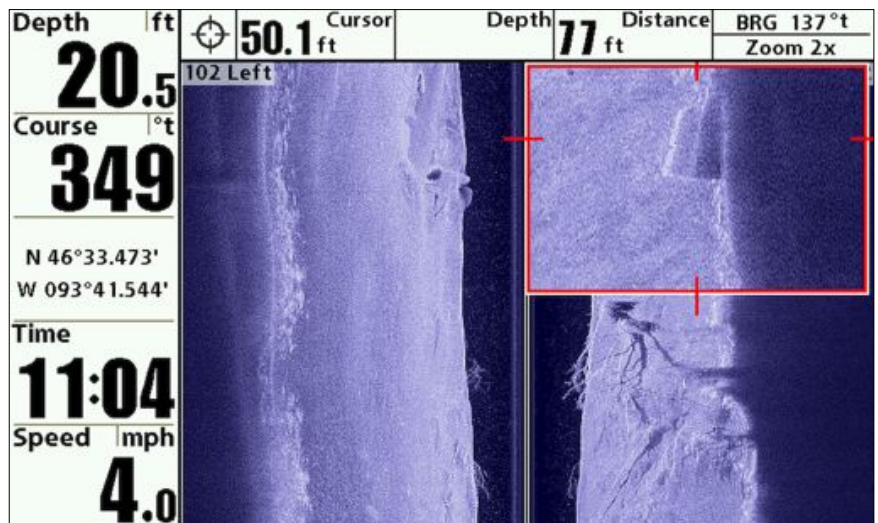
Identification: Rectangular Feature

Depth: River Bank

Size: Approximately 20 feet

Location: East side of river, starboard side of boat traveling upstream

Analysis: Possible artifact partially imbedded in river bank



23. Anomaly 120

Recorded: 8/15/2010

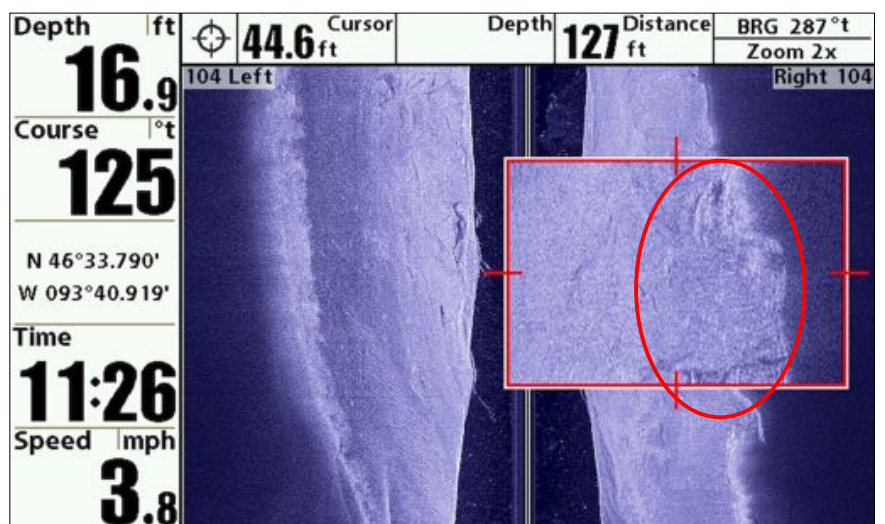
Identification: Boat Shaped Feature

Depth: River Bank

Size: Approximately 42 feet

Location: South side of river, starboard side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a boat, buried amidships with the bow and stern exposed



24. Anomaly 130

Recorded: 8/16/2010

Identification: Boat Shaped Feature

Depth: 7 feet

Size: Approximately 13 x 69 feet

Location: East side of river, starboard side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a boat



25. Anomaly 133

Recorded: 8/16/2010

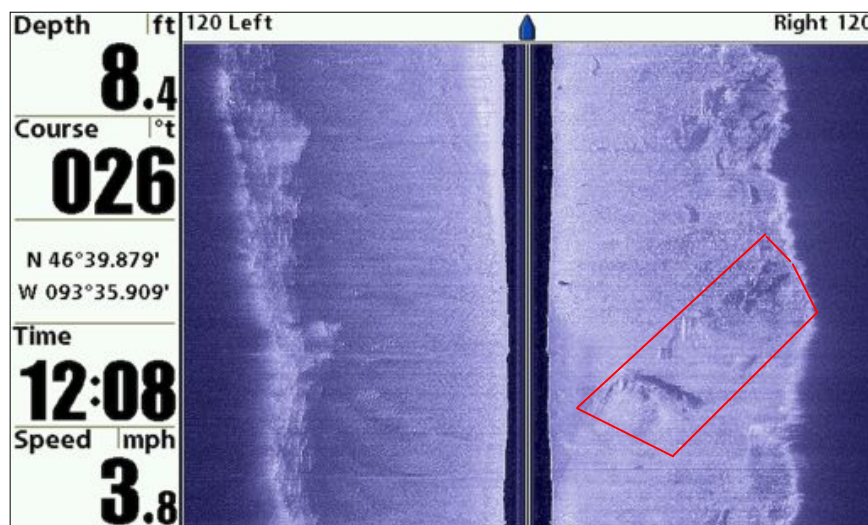
Identification: Boat Shaped Feature

Depth: 8 feet

Size: Approximately 20 x 100 feet

Location: East Southeast side of river, starboard side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a boat in the area where steamer *City of Aitkin/George H. Houghton* burned and sank



26. Anomaly 134

Recorded: 8/16/2010

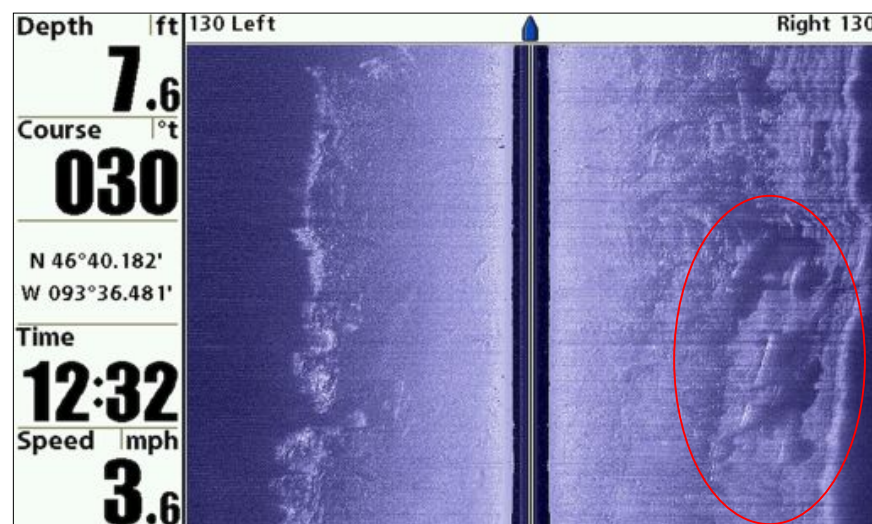
Identification: Boat Shaped Feature

Depth: 7 feet

Size: Approximately between 71-109 feet

Location: East side of river, starboard side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a boat in the area where steamer *City of Aitkin/George H. Houghton* burned and sank



27. Anomaly 142

Recorded: 8/17/2010

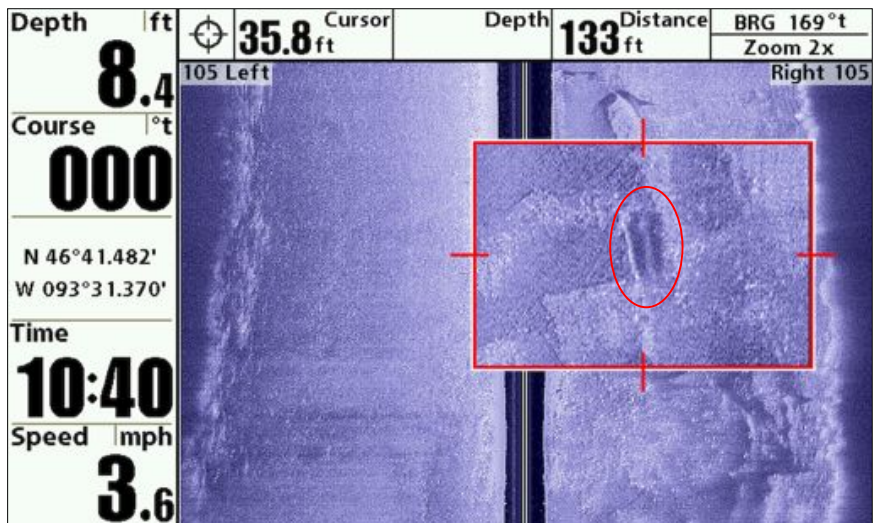
Identification: Rectangular Feature

Depth: 8.4 feet

Size: Approximately 35 feet

Location: East side of river, starboard side of boat traveling upstream

Analysis: Possible artifact partially buried in silt



28. Anomaly 147

Recorded: 8/17/2010

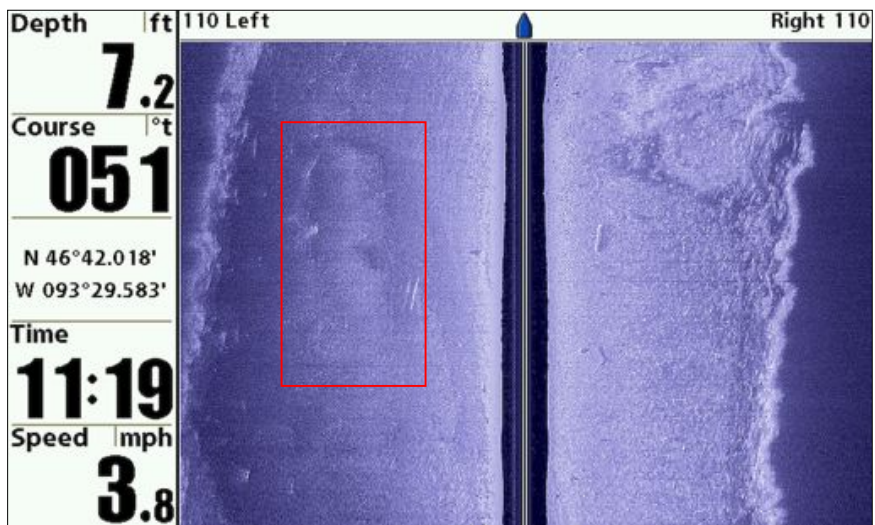
Identification: Rectangular Feature

Depth: 6.2 feet

Size: Approximately 27 x 100 feet

Location: Northwest side of river, port side of boat traveling upstream

Analysis: Possible artifact buried in silt



29. Anomaly 184

Recorded: 8/19/2010

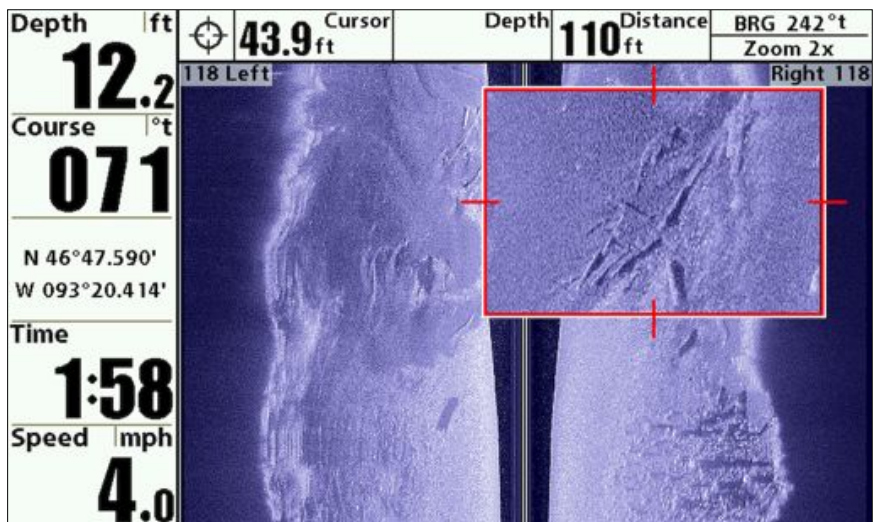
Identification: Boat Shaped Feature

Depth: 12.2 feet

Size: Approximately 81 feet

Location: South side of river, starboard side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a boat



30. Site 3 – Steamboat Crib

21-AK0117

Recorded: 8/21/2010

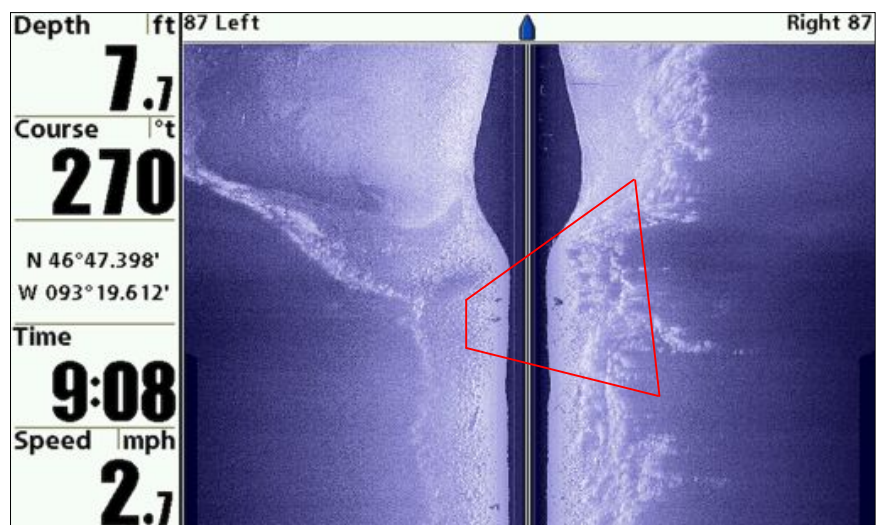
Identification: Steamboat Landing Crib

Depth: River Bank and 5 – 7 feet in channel

Size: Approximately .07 acres

Location: South side of Sandy River near the confluence with the Mississippi River, starboard side of boat traveling downstream

Analysis: Remains of stone and wood crib that served as a steamboat landing at the site where the American Fur Company Post once stood



31. Anomaly 189

Recorded: 8/21/2010

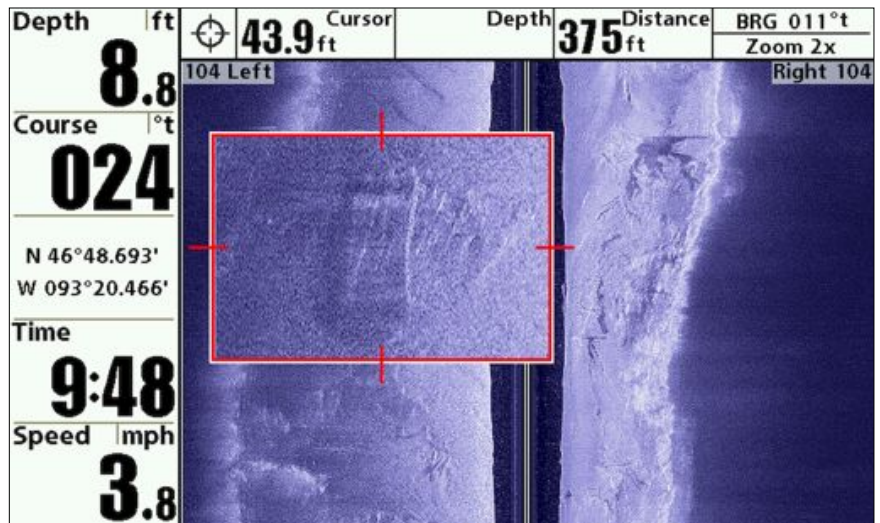
Identification: Boat Shaped Feature

Depth: 8 feet

Size: Approximately 14 x 26 feet

Location: West side of river, port side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a boat



32. Anomaly 203

Recorded: 8/21/2010

Identification: Boat Shaped Feature

Depth: 8 feet

Size: Approximately 15 feet

Location: Southwest side of river, starboard side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a boat, partially buried



33. Anomaly 210

Recorded: 8/22/2010

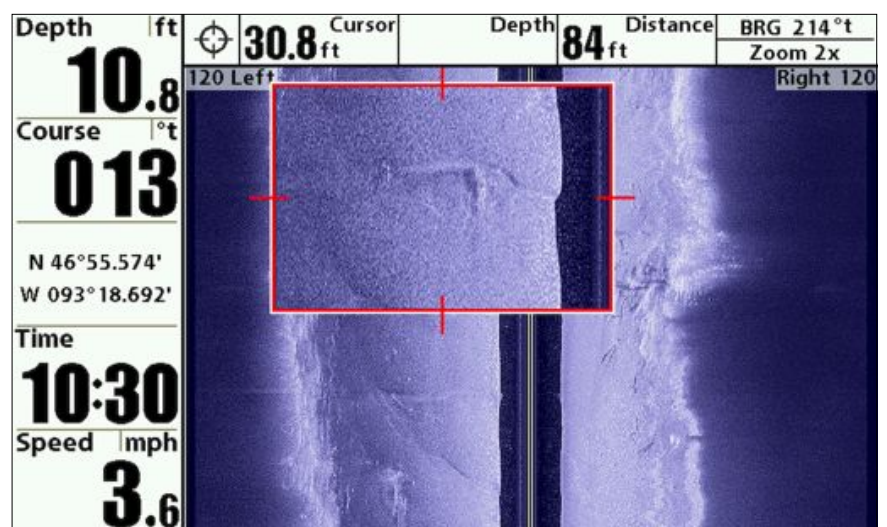
Identification: Rectangular Feature

Depth: 10.8 feet

Size: Approximately 8 x 25 feet

Location: West side of river, port side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a flatboat, partially buried



34. Anomaly 213

Recorded: 8/22/2010

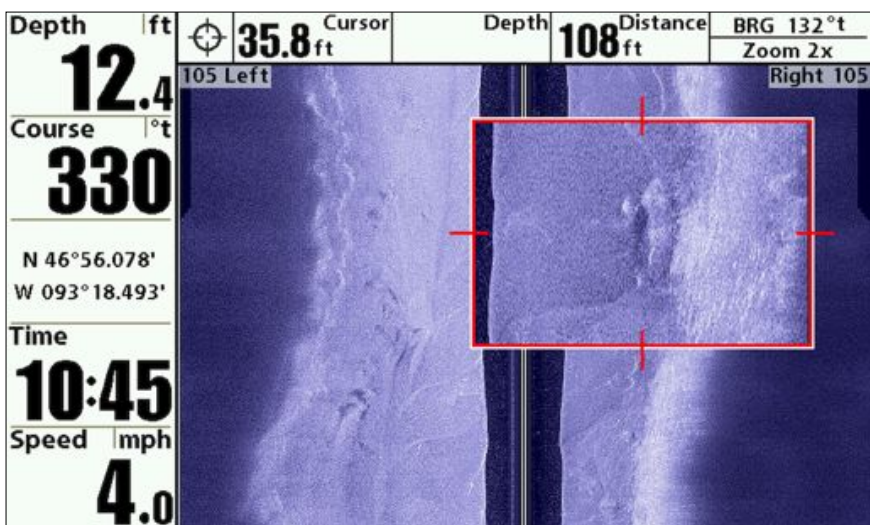
Identification: Boat Shaped Feature

Depth: 12 feet

Size: Approximately 19 feet

Location: East side of river, starboard side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a boat



35. Anomaly 219

Recorded: 8/22/2010

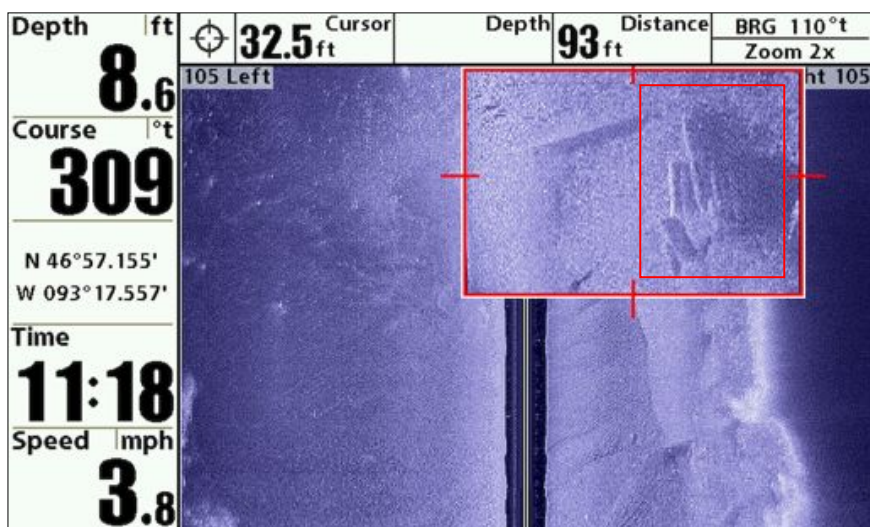
Identification: Boat Shaped Feature

Depth: 8 feet

Size: Approximately 51 feet

Location: Northeast side of river, starboard side of boat traveling upstream

Analysis: Possible artifact whose outline resembles a boat



36. Anomaly 225

Recorded: 8/22/2010

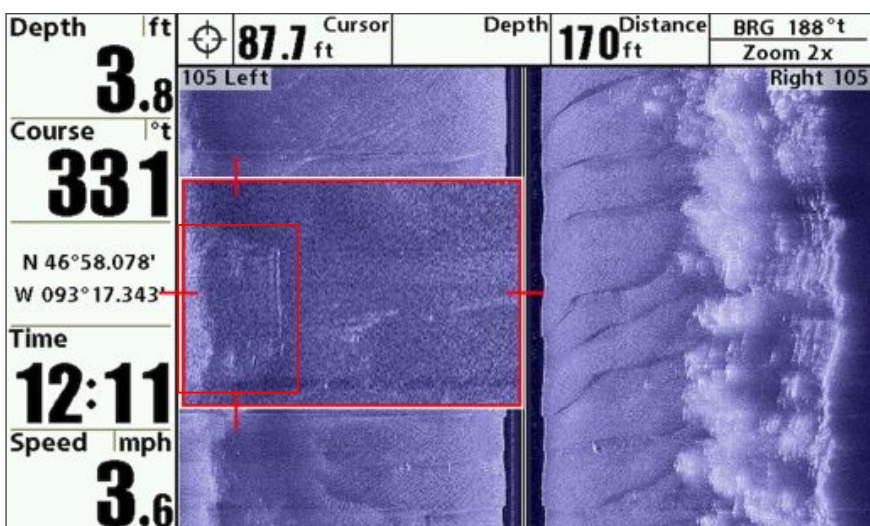
Identification: Rectangular Feature

Depth: 4 feet

Size: Approximately 10 x 24 feet

Location: West side of river, port side of boat traveling upstream

Analysis: Possible artifact partially buried in river bank



37. Anomaly 233

Recorded: 8/22/2010

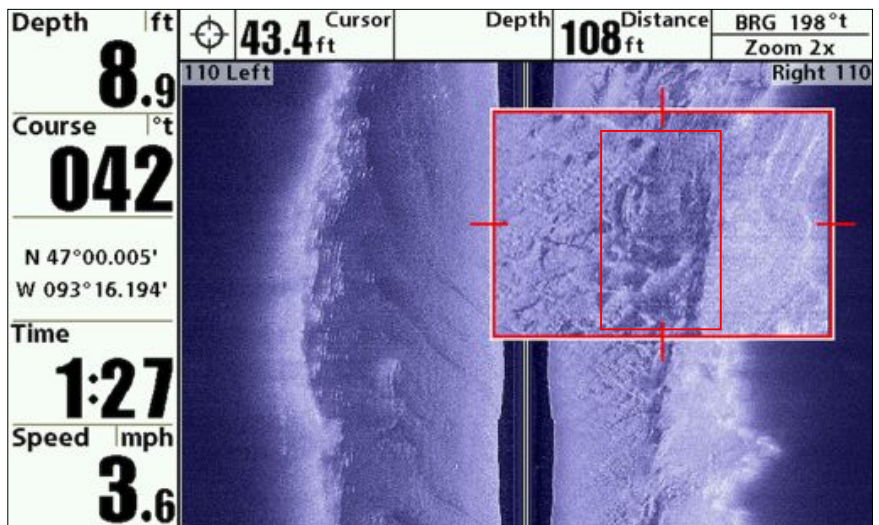
Identification: Boat Shaped Feature

Depth: 9 feet

Size: Approximately 13 feet

Location: Southeast side of river,
starboard side of boat traveling upstream

Analysis: Possible artifact whose outline
resembles a boat



38. Anomaly 234

Recorded: 8/22/2010

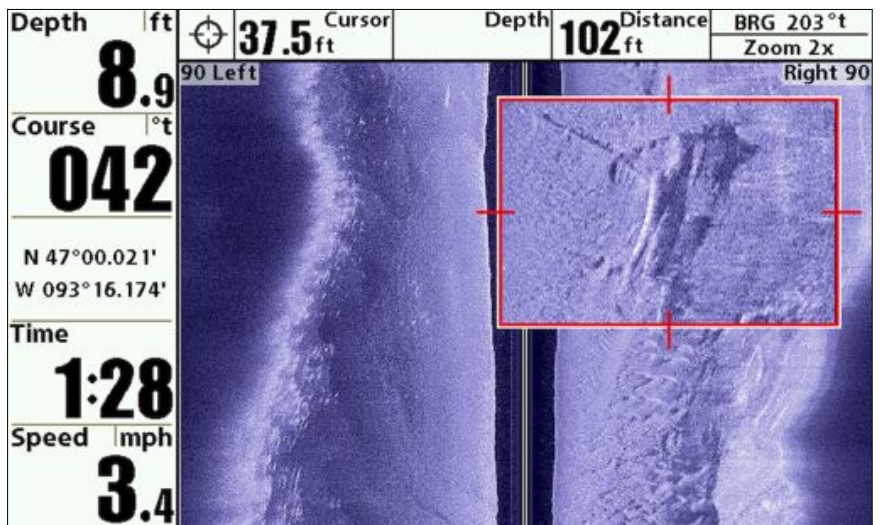
Identification: Rectangular Shaped
Feature

Depth: 9 feet

Size: Approximately 96 feet

Location: Southeast side of river,
starboard side of boat traveling upstream

Analysis: Possible artifact, partially buried



39. Anomaly 235

Recorded: 8/22/2010

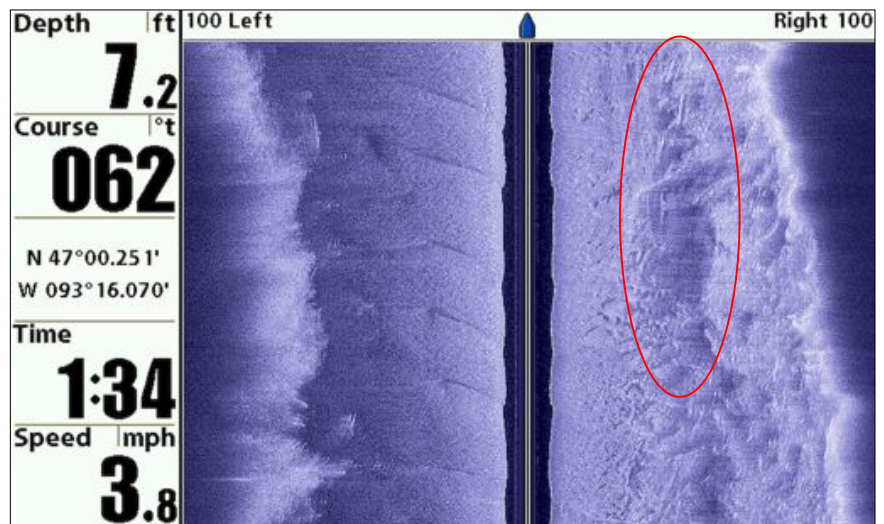
Identification: Boat Shaped Feature

Depth: 7 feet

Size: Approximately 100 feet

Location: Southeast side of river,
starboard side of boat traveling upstream

Analysis: Possible artifact whose outline
resembles a boat, partially buried



40. Site 4 – Mississippi Landing Logging Pier

21-AK0116

Recorded: 8/22/2010

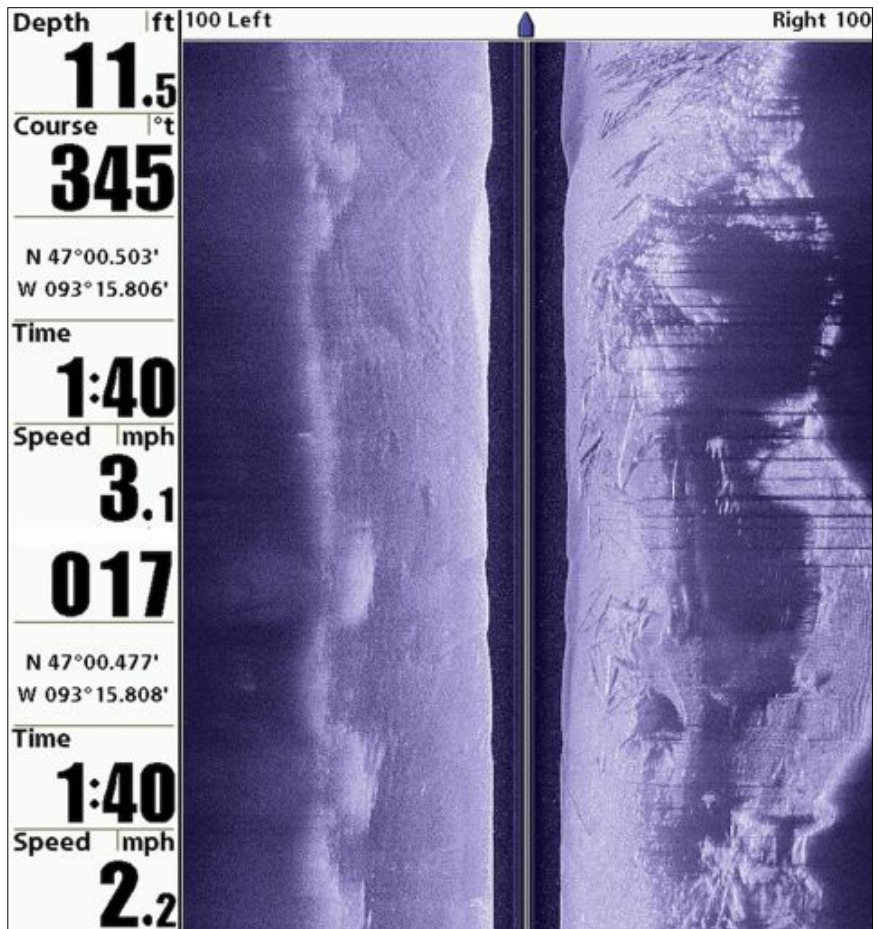
Identification: Pilings from Mississippi Landing Logging Pier

Depth: 10 feet

Size: Approximately .51 acres

Location: East side of river, starboard side of boat traveling upstream

Analysis: At least 39 pilings exist, some protrude above the surface during high water conditions – the streaks in the sonar image represent the shadows of the pilings. There is also an interesting anomaly within the site that may be some machinery – or simply some foliage snagged on some pilings. The image on the right is comprised of two sonar snapshots stitched together.



An historic photograph of the Mississippi Landing Logging Pier remains. From Leo Trunt's *Prosper, Can You Tell Me More?*



August 22, 2010

41 – 42. Anomalies 237 & 238

Recorded: 8/22/2010

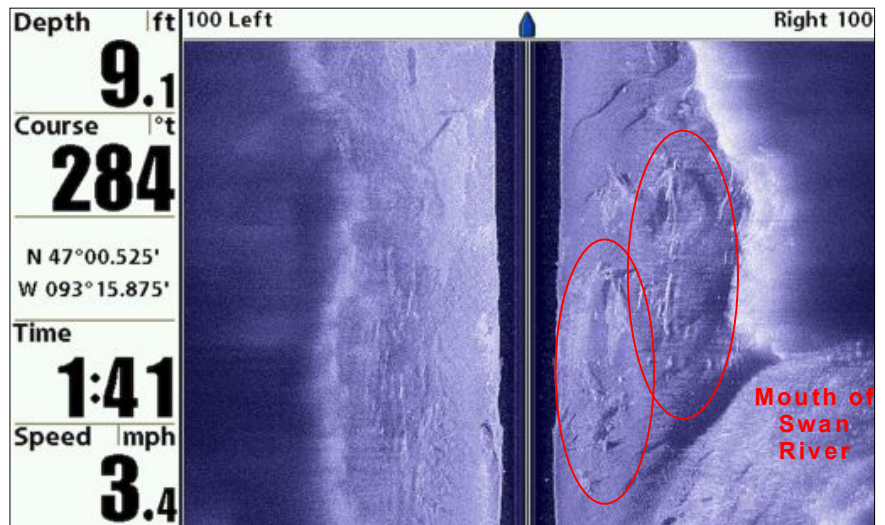
Identification: Boat Shaped Features

Depth: 7 feet

Size: Approximately 40 & 43 feet

Location: North side of river, starboard side of boat traveling upstream

Analysis: Possible artifacts whose outlines resemble boats in the area where steamer *Fawn* caught on a snag and sank



43. Site 5 – Mississippi Landing Railroad Spur & Bridge Remains 21-AK0115

Recorded: 8/22/2010

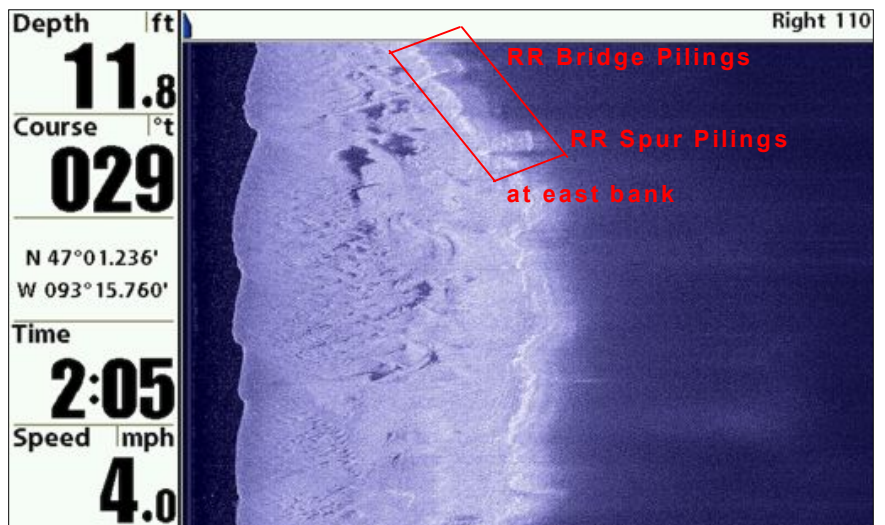
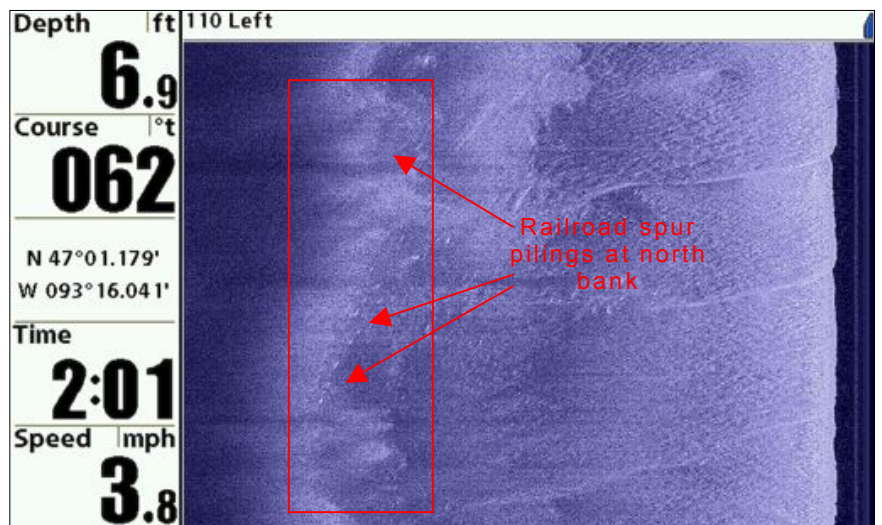
Identification: Pilings from Mississippi Landing Railroad Spur and pilings from the Mississippi, Hill City & Western Railway Bridge

Depth: River bank and 9 feet

Size: Approximately 2.7 acres

Location: North side of river for large number of pilings, port side of boat traveling upstream; East side of river and in channel for other pilings

Analysis: 39 or more pilings in the northern bank and 6 pilings in the eastern bank are the remains of the Swan River Logging Company's railroad spur trestles; 12 or more pilings in 2 rows in the river channel and 4 pilings in the eastern bank supported the Mississippi, Hill City Western Railway Swing Bridge





Above: Railroad trestle support pilings at the Southeastern – most edge of the site.

Below: Railroad bridge support pilings at the Northeastern – most edge of the site.



Even during high water conditions, 2 rows of bridge pilings protrude above the surface; other pilings exist underwater as well.

The river channel has migrated since the early 20th Century; the double red lines indicate where the Mississippi Landing Railroad Spur once ran along the riverbank to meet up with one of the Logging Piers. the box marks the pilings for the Mississippi, Hill City & Western Railway Bridge.



45. Anomaly 239

Recorded: 8/22/2010

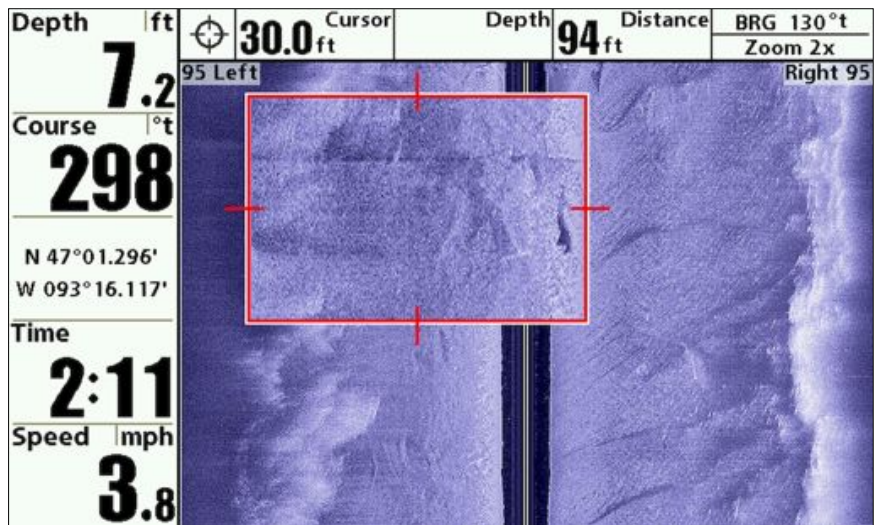
Identification: Rectangular Feature

Depth: 7 feet

Size: Approximately 51 feet

Location: South side of river, port side of boat traveling upstream

Analysis: Possible buried artifact whose outline suggests a flatboat



46. Anomaly 242

Recorded: 8/22/2010

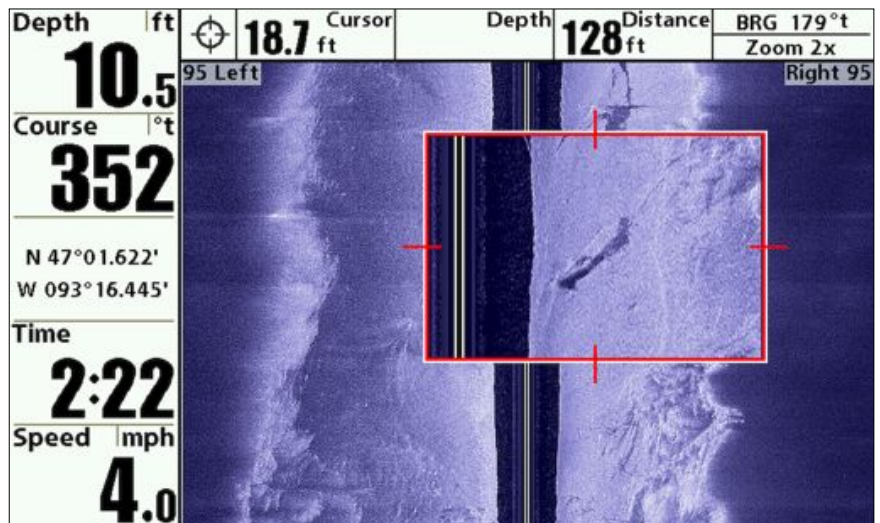
Identification: Boat-Shaped Feature

Depth: 9 feet

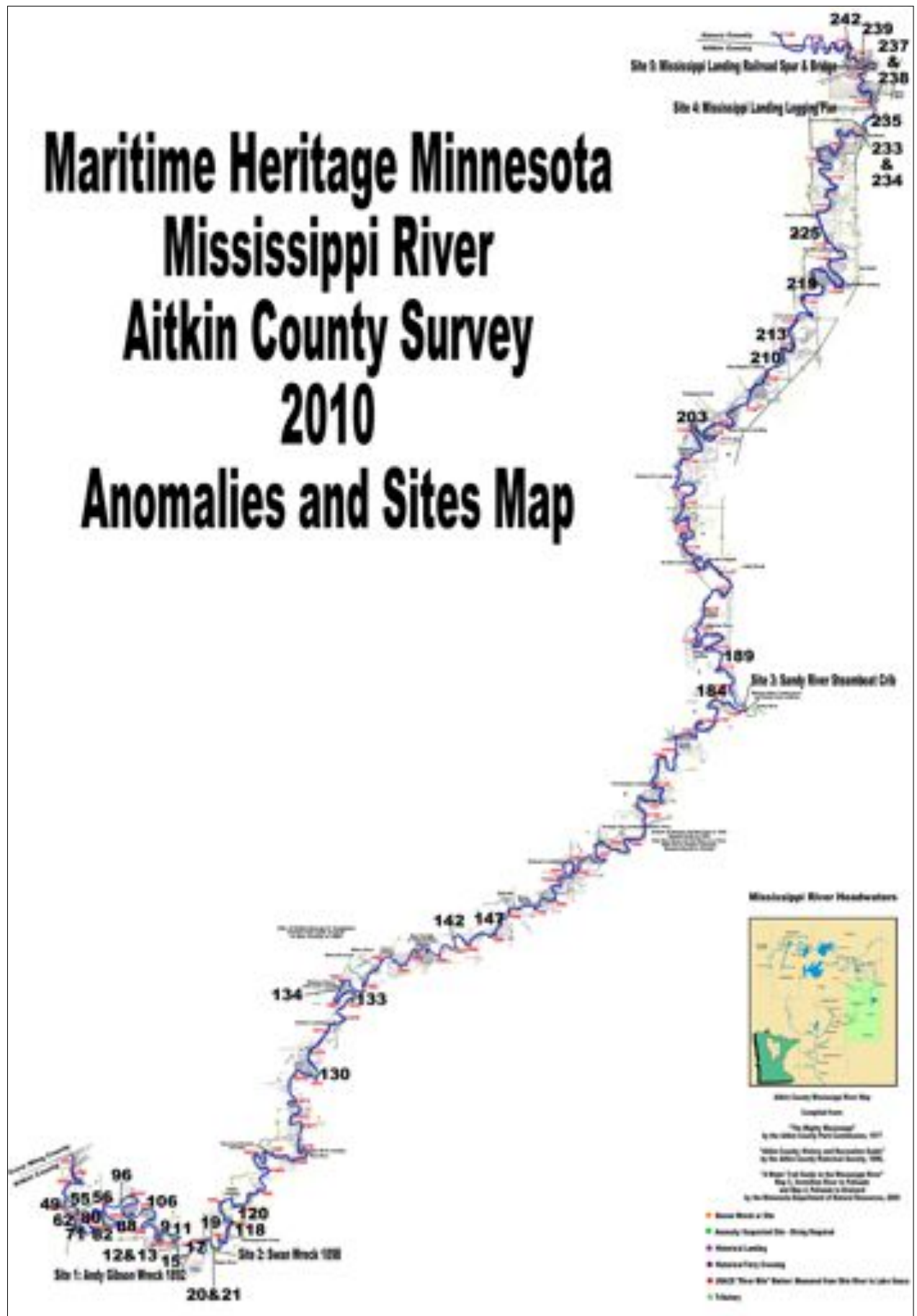
Size: Approximately 27 feet

Location: East side of river, starboard side of boat traveling upstream

Analysis: Possible buried artifact whose outline suggests a boat, possibly a steam launch



Maritime Heritage Minnesota Mississippi River Aitkin County Survey 2010 Anomalies and Sites Map



Possible New Wreck and Underwater Sites

Reviewed below are the anomalies that MHM is the most eager to investigate, in order of their significance.

Anomalies 21 and 20: These two anomalies are located where the sternwheeler *Walter Taylor* is believed to have been abandoned, and may be part of the same site. In 2008, during low water conditions, MHM located a concentration of bricks (possible remains of a steamer's firebox – the wreck *Swan* has a similar collection of bricks), two worked wooden planks, wooden beams resembling stanchions protruding from the river bottom, and a metal cable protruding from the upper river bank, suggesting a mooring site.



Left: Concentration of bricks that might be the remains of a steamer's firebox.

Below: Two worked planks and a possible stanchion protruding from the silt.



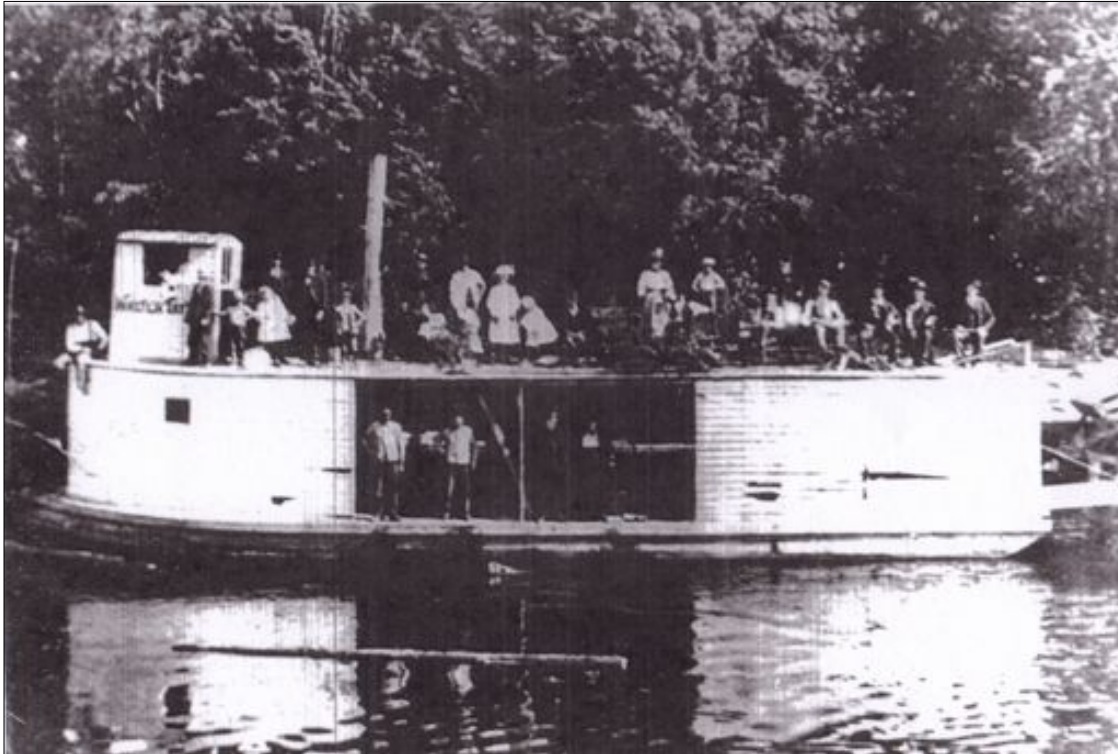
Above: Two possible stanchions or wreck components protruding from the silt.

Right: Metal cables protruding from the river bank.



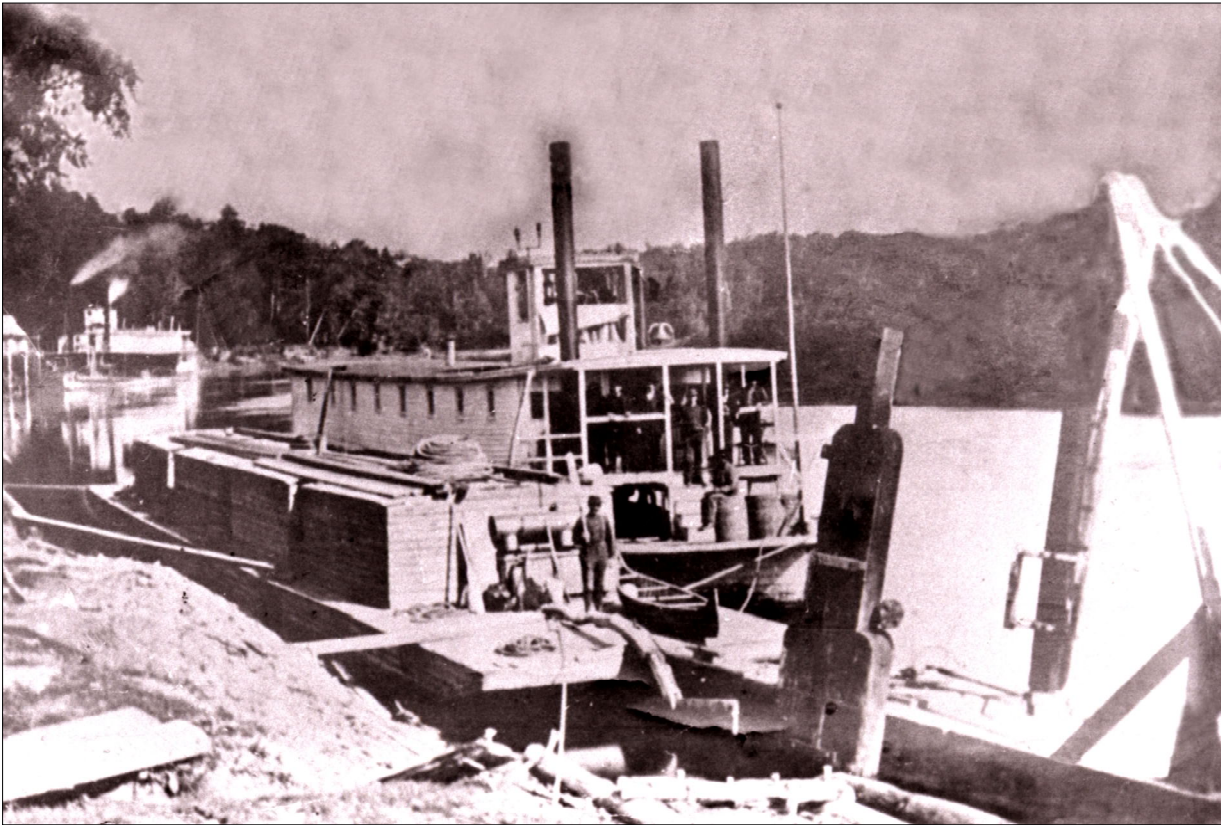
Walter Taylor was owned by Cluff and Taylor of Aitkin, and was christened on 17 September 1895. This steamer worked the river between Aitkin and Grand Rapids. She sank once during her working life, at the mouth of the Sandy River in early October 1897, but was raised quickly and resumed service (*Aitkin Age*, 21 September 1895, 9 October 1897). In late May 1899,

Walter Taylor conducted a weekly packet service between Aitkin and Sandy Lake, and the last report of this steamer's activity seems to be her charter on 19 October 1899 by a contractor named Falconer, who required the steamer to carry himself and his supplies to a bridge construction site (*Aitkin Republican*, 1 June 1899; *Aitkin Age*, 21 October 1899). According to an Aitkin resident, her "husband worked at Gyde's mill and saw the *Walter Taylor* sink at the mouth of Mud [Ripple] River. It sprang a leak and Mr. Cluff went down every day for a month to bail it out, hoping they could save it, but it sank, and in a few years was covered with sand" (Schroeder 1948).



Walter Taylor. Courtesy of the Aitkin County Historical Society.

Anomalies 237 and 238: Anomalies 237 and 238 are in close proximity and may be associated with each other – possibly both as pieces of the sternwheeler *Fawn*. *Fawn* had the longest working life of the Headwaters Mississippi steamboats. She was launched in 1882 according to one of her captains, Christopher Columbus Sutton, and operated until 1894 (Hart 1952, 11). She had an adventurous and busy schedule, and like *Walter Taylor*, sank more than once. The first time was at the mouth of the Mud [Ripple] River in Aitkin in mid – April 1894, but she was raised and put back in service by mid – June. However, by late August she sank again, this time at her mooring place, but by early September she was repaired and back to work. However, the “*Fawn* struck a snag in the river just below the mouth of the Swan [River] on Thursday, and sank in the channel,” this becoming her final resting place (*Aitkin Age*, 21 April, 24 June, 25 August, 10 November 1894) near the Mississippi Landing Logging Pier site (21-AK0116). It has been reported that “after a while, the steamboat got filled in with sand and it became stuck into the sandbars of the river. In 1942, it was dynamited out by some local men who sold it for scrap iron” (Trunt 1993, 100). MHM can only assume that the “scrap iron” referred to must be the steamer’s machinery since the vessel was wooden – hulled. Although we aren’t thrilled with learning the wreck might have been blown – at least partially – up, it is hoped that the wreck’s bottom is somewhat intact.



Fawn next to a wanigan. Note the *Andy Gibson* – with steam up – in the background. Courtesy of the Itasca County Historical Society.

Anomalies 133 and 134: Both of these large anomalies are good candidates for the location of the abandonment and burning of the sternwheeler *City of Aitkin/George H. Houghton*. The wreck has reportedly been seen during low water conditions and the boat “was burned there about 300 feet above...a portage which the river cut through in 1903” just above Clarks Landing (Sanford 1948). While anomalies 133 and 134 are about two and three miles south of this location, MHM holds that they are still good contenders for this wreck.

Conclusion: Other promising anomalies that may be steamboats, flatboats, wanigans, steam launches, and small personal craft are numbers 12, 88, 96, 184, 213, and 242. MHM plans to dive on every anomaly – and if the water is low, walk on them – and document (using SCUBA) the three newly identified sites in 2011 if proper funding can be secured. With the positive results of the Mississippi River Aitkin County Survey in hand, MHM is confident that the potential for identifying more Headwaters Mississippi River steamboats and other watercraft is very good.

MINNESOTA ARCHAEOLOGICAL SITE FORM

OFFICE OF THE STATE ARCHAEOLOGIST

Fort Snelling History Center, St. Paul, MN 55111 (612) 725-2411

STATE HISTORIC PRESERVATION OFFICE

345 Kellogg Boulevard W., St. Paul, MN 55102 (612) 296-5434

OSA License #: 10-03, 10-04

SHPO RC #:

Date(s) of Fieldwork: August 21, 2010

☒ New Site☐ Site Update

SITE #: 21-AK0117

Site Name: Sandy River Steamboat Crib

Field #:

LOCATIONAL INFORMATION (*attach USGS topographic quad and sketch map with site location outlined*)

County: Aitkin

City/Twp. Name: Libby

SHPO Region:

USGS 7.5' Quadrangle Map (*name and year*): Libby Quadrangle, 1966

Township: Libby Range: T 50 N R 24 W Section: 25

3 Sections (at least 2): NW 1/4, SE 1/4, SE 1/4

Township: Range: Section:

3 Sections (at least 2):

Township: Range: Section:

3 Sections (at least 2):

UTM Site Coordinates (*use 1927 datum; identify center point only*):

Zone 15

Easting 475997.69 m

Northing 5181846.66 m

Other locational information:

The crib is located on the northwest bank of the Sandy River near its mouth at the confluence of the Mississippi River.

SITE CHARACTERISTICS
Acreage: .07 Site Dimensions (*both horizontal and vertical/depth, in metric*): 76 m x 61 m x 14 m x 35 m x 4 m verticalFeatures (☒ *all that apply*): ☐ earthwork ☐ depression ☐ foundation ☒ other ☐ none*describe*: Stone pile on the north bank of the Sandy RiverSite Description (☒ *all that apply and describe*):☒ single artifact ☐ artifact scatter ☐ lithic scatter ☐ earthwork/mound☒ structural ruin ☐ rock alignment ☐ rock art ☐ cemetery/burial☐ standing structure (SHPO structure # if known): ☐ other:*describe*: Remains of stone and wood crib that served as a steamboat landingInferred Site Function (*must specify*): The crib served as a landing place for steamboats where passengers and cargo would be off-loaded and on-loadedCurrent Land Use (☒ *all that apply*):☐ cultivated☐ woodland☐ commercial☐ unknown☐ fallow☐ recreational☐ industrial☒ other: river bank & channel☐ grassland☐ road☐ residential

Surface Visibility

☒ excellent☒ good – parts underwater but shallow☐ fair☐ poor ☐ noneDegree of Disturbance (☒ *and describe*):☐ minimal☐ moderate☒ heavy☐ destroyed☐ unassessed*describe disturbance type(s)*: The crib has collapsed over time and it appears that many of the stones have been removed from the site over the years and some stone have migrated into the center of the channel. An informant has told MHM that some wood survives along the crib's sides, probably in the river bank now.

Current Threats to Site:

☐ erosion☐ development☐ agricultural☐ none known☒ other: ice, water, floating debris

SITE #: 21-AK0117

Site Name: Sandy River Steamboat Crib

Field #:

CULTURAL/TEMPORAL AFFILIATION(✓ all that apply; include level of certainty: 1 = confirmed; 2 = probable):

Period: ☐ indeterminate ☐ Contact (1650-1837)
☐ Pre-Contact (9500 BC - 1650 AD) ☒ Post-Contact (1837-1945)

Pre-Contact Context: (if unable to discern specific context, ✓ here ☐)

PaleoIndian Tradition ☐ indeterminate ☐ Folsom ☐ Lanceolate Point
☐ Clovis ☐ Eastern Fluted ☐ other:

Archaic Tradition ☐ indeterminate ☐ Prairie ☐ Riverine
☐ Shield ☐ Lake-Forest ☐ other:

Woodland Tradition ☐ indeterminate ☐ Fox Lake ☐ Laurel
☐ Early ☐ Transitional ☐ Lake Benton
☐ Brainerd ☐ Kathio ☐ Psinomani/Sandy Lake
☐ Black Duck ☐ Havana Related ☐ Southeastern MN Late
☐ other:

Plains Village ☐ indeterminate ☐ Cambria ☐ other:
☐ Great Oasis ☐ Big Stone

Mississippian Tradition ☐ indeterminate ☐ Silvernale ☐ other:

Oneota Tradition ☐ indeterminate ☐ Blue Earth ☐ Orr ☐ other:

Contact Context: (if unable to discern specific context, ✓ here ☐)

American Indian ☐ indeterminate ☐ Eastern Dakota ☐ other:
☐ Ojibwe ☐ Western Dakota

EuroAmerican ☐ indeterminate ☐ British ☐ other: _____
☐ French ☐ Initial US

Post-Contact Context: (if unable to discern specific context, ✓ here ☐)

☐ Indian Communities & Reservations (1837-1934) ☐ St. Croix Triangle Lumbering (1830s-1900s)
☐ Early Agriculture & River Settlement (1840-1870) ☐ Railroads & Agricultural Development (1870-1940)
☒ Northern MN Lumbering (1870-1930s) ☐ Iron Ore Industry (1880s-1945)
☒ Tourism & Recreation (1870-1945) ☐ Urban Centers (1870-1940)

Dating Methods (✓ all that apply):

☐ artifact style/cross dating ☐ radiocarbon ☒ historic accounts ☐ Andreas atlas (1874)
☐ Sanborn maps (list years): _____ ☐ plat maps (list years): _____
☒ other(s) (specify): historic photograph

Specify context dates (if radiometric, cite lab no. and uncalib. date; note if AMS): 1870-1921

MATERIALS PRESENTMaterial Classes (✓ all that apply):

<u>Ceramics</u>	<u>Lithics</u>	<u>Biological Remains</u>	<u>Other Materials</u>
<input type="checkbox"/> Aboriginal	<input type="checkbox"/> projectile points	<input type="checkbox"/> animal	<input type="checkbox"/> glass
<input type="checkbox"/> EuroAmerican	<input type="checkbox"/> other flaked stone tools	<input type="checkbox"/> human	<input type="checkbox"/> metal
	<input type="checkbox"/> debitage	<input type="checkbox"/> unidentified bone	<input type="checkbox"/> FCR
	<input type="checkbox"/> ground/pecked stone	<input type="checkbox"/> floral	<input checked="" type="checkbox"/> other: <u>stones, wood</u>

Additional information (e.g., temper, charcoal type, raw material, etc.):

SITE #: 21-AK0117

Site Name: Sandy River Steamboat Crib

Field #:

Major Exotic Materials (*i.e.*, "exotic" relative to local area; ✓ all that apply):

☐ catlinite ☐ native copper ☐ Hixton orthoquartzite
☐ Knife River Flint ☐ obsidian ☐ other:

Diagnostic Type/Information (*e.g.*, Brainerd ceramics, machine-cut nails; describe decoration, function, manufacturer, etc.):

Ceramic

Lithic

Glass

Metal

Other historic photograph and account insure the crib's identification

Additional information:

ENVIRONMENTAL DATA

Major Drainage System

☐ Cedar River ☐ Des Moines River ☐ Lake Superior ☐ Minnesota River
☒ Mississippi River (*N of MN River*) ☐ Red River ☐ Rainy River
☐ Mississippi River (*S of MN River*) ☐ Missouri River ☐ St. Croix River

Watershed Index Map no. (MnDNR, Division of Waters, 1990): 9Distance to Existing Water Source (*per USGS topographic map, in feet or miles*): 0Ancient/Formal Water Feature (*name, type and distance to such feature*): Mississippi River, 0Topographic Setting (✓ all that apply):Upland☐ general upland☐ bluff edge☐ hilltop☐ glacial beach ridge☐ wetland☐ other: _____Riverine☐ alluvial fan☐ terrace☐ stream-stream junction☐ bluff-base☐ cave/rockshelter☒ other: riverbankLacustrine☐ inlet/outlet☐ peninsula☐ island☐ isthmus☐ shoreline☐ other:**HISTORIC SITES ONLY:**Historic setting: ☒ rural ☐ urban ☐ other:Type(s): ☐ industrial ☒ commercial ☐ domestic ☐ government ☒ other: recreationalHistoric transportation route (*e.g.*, road, waterway, rail); identify type, direction & distance: Sandy River running in a generally East-West direction, 0 miles & Mississippi River running in a generally North-South direction, 40 yards**OWNERSHIP INFORMATION**Ownership Type (✓ all that apply):

☐ federal ☒ state ☐ local ☐ tribal ☒ private ☒ unknown

Land Owner (*name and address*): The site is at least partially – if not entirely – owned by the State of Minnesota, since at least a portion of the site falls within the bottom and river bank of the Sandy River covered by the State. However, a portion of the site might be considered to be on private land because, since its construction, the river bank has shifted and part of the site might be considered "on land," not in/on the river bank. The last known owner was Gene W. Hill, 53581 State Highway 65, McGregor, MN 55760-5501. Mr. Hill would be quite elderly if he is still living; his listed phone number has been disconnected. MHM gained this information from Ken Muller, Olson's stepfather, whose parents Floyd and Clara Muller owned this land in the 1960s. Cliff Muller, Ken's brother, remembers seeing the wooden sides of the crib still extant in the 1970s.

Significant historic owner(s) and period(s) of ownership, if known: John Jacob Astor's American Fur Company owned the land in the mid-19th Century, and it was later the site of the Libby Post Office. The steamboat crib itself was constructed around 1870 and was not associated with the AFC as far as MHM can surmise.

Year and Source of Ownership Information (*e.g.*, plat map, recorder's office, etc.): Hart, Irving H., "The Site of the Northwest Company Post on Sandy Lake" in *Minnesota History*, December 1926.

SITE #: 21-AK0117

Site Name: Sandy River Steamboat Crib

Field #:

INVESTIGATOR/REPORTER INFORMATIONType(s) of Investigation (✓ all that apply):✓ reconnaissance ✓ evaluation ✓ data recovery ✓ other: photographyMethods/techniques employed (% all that apply):

☐ informant report ☐ small diameter soil coring (. 1" diameter)
☐ surface survey ☐ geomorphological survey (*specify*):
☐ shovel testing ☐ geophysical survey (*specify*):
☐ excavation units 100% other(s): remote sensing

Informant Name and Address: none

Artifact Repository (*name and accession nos.*): none

Report Citation: Mississippi River Aitkin County Survey, Maritime Heritage Minnesota, 2010

Major Bibliographic Reference(s) to Site:

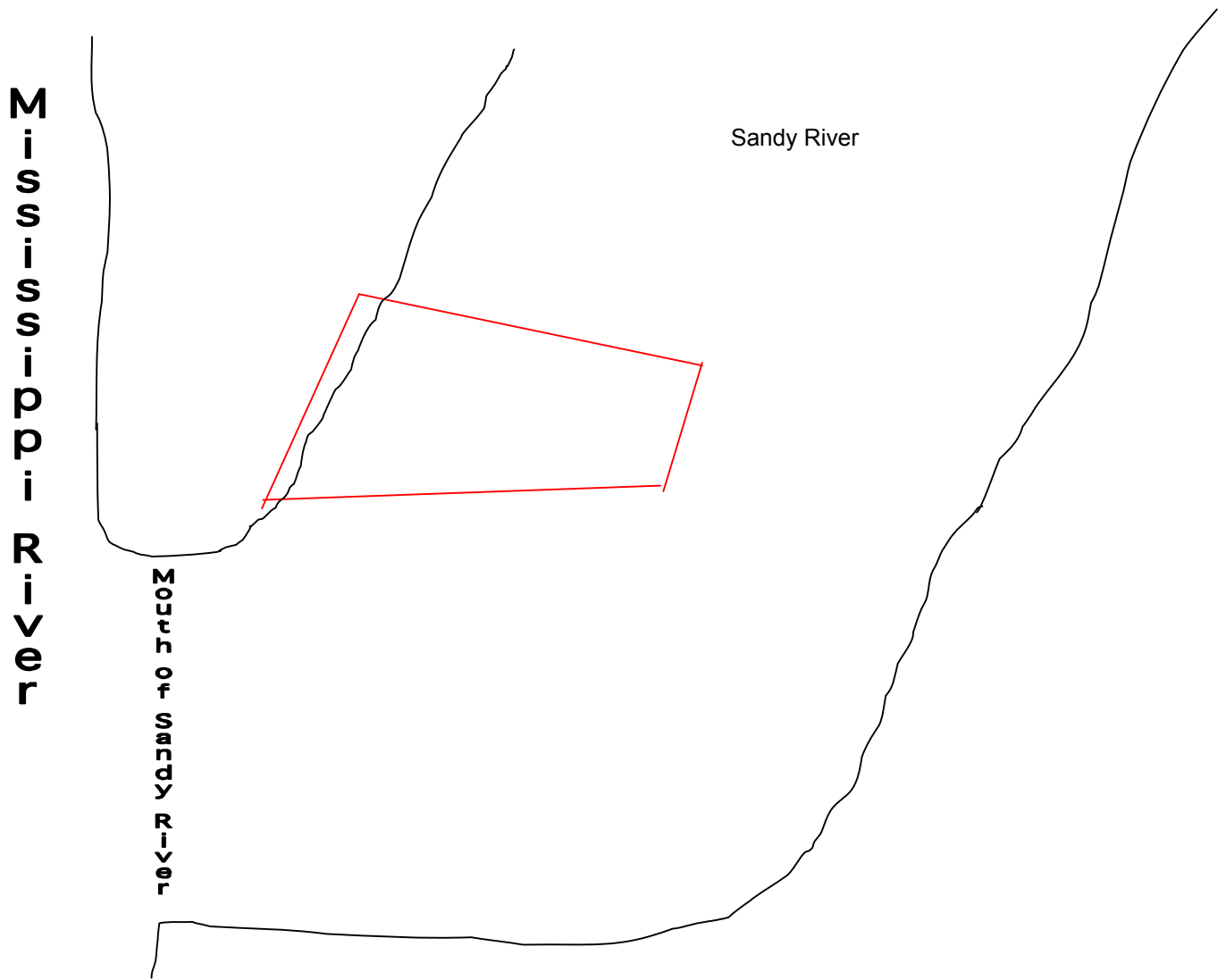
Hart, Irving H., "The Site of the Northwest Company Post on Sandy Lake" in *Minnesota History*, 311-325, December 1926.Hart, Irving Harlow, "Steamboating on Mississippi Waters," in *Minnesota History*, 7-19, Spring 1952.Principal Investigator (*name and affiliation*): Ann Merriman and Christopher Olson, Maritime Heritage Minnesota**ADDITIONAL NOTES** (*use space below or attach extra sheets, as needed*)

Photo of the crib taken by Irving H. Hart in 1949, looking southwest toward the mouth of the Sandy River.



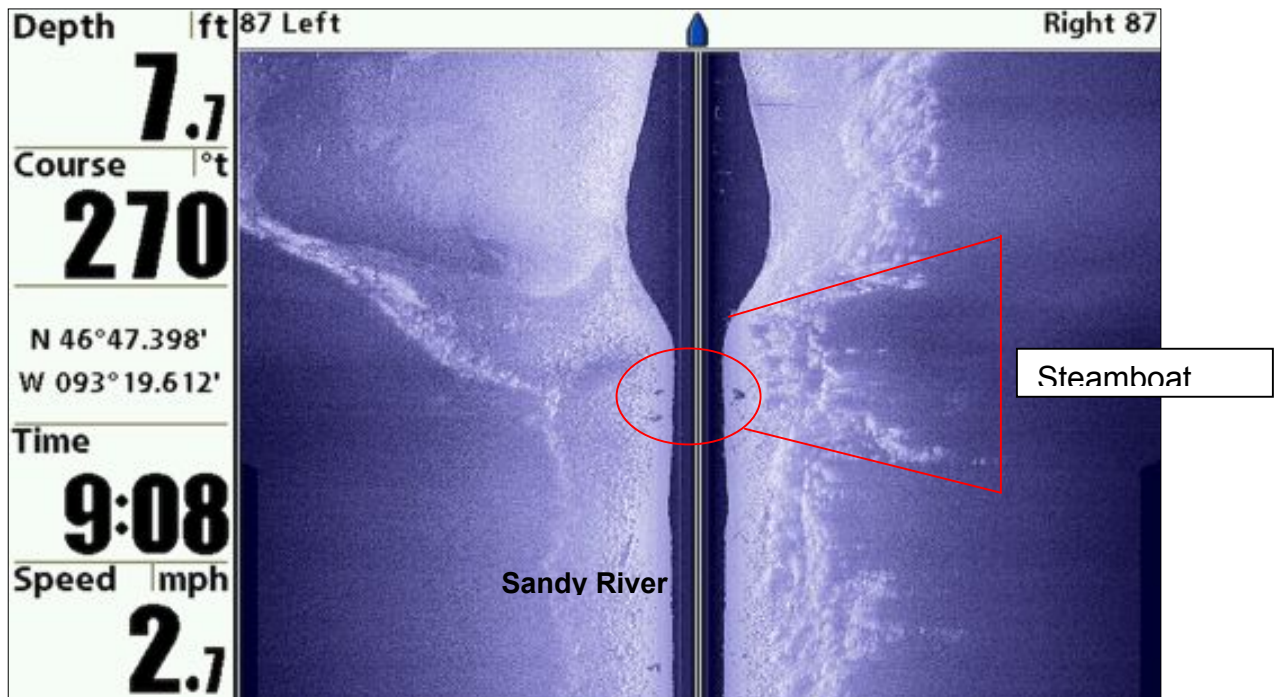
August 2010. MHM attempted to create the same angle and distance for the photograph as Hart used, but large snags prevented us from positioning the boat properly.

MAPS (*attach USGS topographic quad and sketch map with site location outlined*)Form Completed by (*name and date*): Ann Merriman and Christopher Olson, November 25, 2010





Approaching the site from the southwest, coming from the Mississippi River.



This sonar image was taken when traveling downstream heading in a southwesterly direction toward the mouth of the Sandy River. MHM is confident that some stones that once made up the Steamboat Crib have rolled into the channel of the Sandy River and are circled. Other stones are evident – and picked up by the sonar unit - among the long grasses that, in August 2010, grew prolifically around the crib in the high water.

MINNESOTA ARCHAEOLOGICAL SITE FORM

OFFICE OF THE STATE ARCHAEOLOGIST

Fort Snelling History Center, St. Paul, MN 55111 (612) 725-2411

STATE HISTORIC PRESERVATION OFFICE

345 Kellogg Boulevard W., St. Paul, MN 55102 (612) 296-5434

OSA License #: 10-03, 10-04

SHPO RC #:

Date(s) of Fieldwork: August 22, 2010

☒ New Site☐ Site Update

SITE #: 21-AK0116

Site Name: Mississippi Landing Logging Pier

Field #:

LOCATIONAL INFORMATION (*attach USGS topographic quad and sketch map with site location outlined*)

County: Aitkin

City/Twp. Name: Ball Bluff

SHPO Region:

USGS 7.5' Quadrangle Map (*name and year*): Jacobson 1966

Township: Ball Bluff Range: T 52 N R 23 W Section: 9

3 Sections (at least 2): NW 1/4, SE 1/4, NE 1/4

Township: Range: Section:

3 Sections (at least 2):

Township: Range: Section:

3 Sections (at least 2):

UTM Site Coordinates (*use 1927 datum; identify center point only*):

Zone 15

Easting 479989.09 m

Northing 5206071.88 m

Other locational information: As of August 2010, the site was in 10 feet of water at its deepest with many pilings above the surface, located on the east side of the Mississippi River bank, south of the mouth of the Swan River.

SITE CHARACTERISTICS
Acreage: .51 Site Dimensions (*both horizontal and vertical/depth, in metric*): 96 m x 37 m x 58 m x 21 m x 3 m deepFeatures (☒ *all that apply*): ☐ earthwork ☐ depression ☐ foundation ☒ other ☐ none*describe*: Wooden pilings imbedded in the river bottom and extending above the surface.Site Description (☒ *all that apply and describe*):☐ single artifact ☐ artifact scatter ☐ lithic scatter ☐ earthwork/mound☒ structural ruin ☐ rock alignment ☐ rock art ☐ cemetery/burial☐ standing structure (SHPO structure # if known): ☐ other:

describe: The remains of the Mississippi Landing Logging Pier, comprised of large wooden pilings, that was once a part of a larger area known as Mississippi Landing. At least 39 pilings exist, visible in sonar images.

Inferred Site Function (*must specify*): Logs would be dumped here from railroad cars, rolled onto the wooden pier, and then into the river for transport via "log runs" or "log drives."

Current Land Use (☒ *all that apply*):☐ cultivated ☐ woodland☐ commercial☐ unknown☐ fallow ☒ recreational☐ industrial☒ other: waterborne transportation☐ grassland ☐ road☐ residential

Surface Visibility

☒ excellent (**above water**)☐ good☐ fair☒ poor (**underwater at river bottom**)☐ noneDegree of Disturbance (☒ *and describe*):☐ minimal☐ moderate☒ heavy☐ destroyed☐ unassessed*describe disturbance type(s)*: Pilings have been worn down/away from ice and water action; dock portion is completely gone.

Current Threats to Site:

☐ erosion☐ development☐ agricultural☐ none known☒ other: ice, water, floating debris, watercraft

SITE #: 21-AK0116

Site Name: Mississippi Landing Logging Pier

Field #:

CULTURAL/TEMPORAL AFFILIATION

(✓ all that apply; include level of certainty: 1 = confirmed; 2 = probable):

Period:

<input type="checkbox"/> Indeterminate	<input type="checkbox"/> Contact (1650-1837)
<input checked="" type="checkbox"/> Pre-Contact (9500 BC - 1650 AD)	<input checked="" type="checkbox"/> 1 Post-Contact (1837-1945)

Pre-Contact Context: (if unable to discern specific context, ✓ here __)

PaleoIndian Tradition _ indeterminate _ Folsom _ Lanceolate Point
 _ Clovis _ Eastern Fluted _ other:

Archaic Tradition — indeterminate — Prairie — Riverine
 Shield Lake-Forest other:

<i>Woodland Tradition</i>	— indeterminate	— Fox Lake	— Laurel
	— Early	— Transitional	— Lake Benton
	— Brainerd	— Kathio	— Psinomani/Sandy Lake
	— Black Duck	— Havana Related	— Southeastern MN Late
			— other:

Plains Village — indeterminate — Cambria — other:
Great Oasis Big Stone

Mississippian Tradition indeterminate Silvernale other:

Oneota Tradition indeterminate Blue Earth Orr other:

Contact Context: (if unable to discern specific context, ✓ here __)

American Indian — indeterminate — Eastern Dakota — other:
 — Ojibwe — Western Dakota

EuroAmerican _ indeterminate _ British
French Initial US _ other: _____

Post-Contact Context: *(if unable to discern specific context, ✓ here __)*

— Indian Communities & Reservations (1837-1934)	— St. Croix Triangle Lumbering (1830s-1900s)
— Early Agriculture & River Settlement (1840-1870)	— Railroads & Agricultural Development (1870-1940)
✓ Northern MN Lumbering (1870-1930s)	— Iron Ore Industry (1880s-1945)
— Tourism & Recreation (1870-1945)	— Urban Centers (1870-1940)

Dating Methods (☒ *all that apply*):

☐ artifact style/cross dating ☐ radiocarbon ☒ historic accounts ☐ Andreas atlas (1874)
☐ Sanborn maps (list years): _____ ☐ plat maps (list years): _____
☒ other(s) (*specify*): historic photograph

Specify context dates (*if radiometric, cite lab no. and uncalib. date; note if AMS*): 1892 ~ 1917 or later

MATERIALS PRESENT

Material Classes (☒ *all that apply*):

<u>Ceramics</u>	<u>Lithics</u>	<u>Biological Remains</u>	<u>Other Materials</u>
— Aboriginal	— projectile points	— animal	— glass
— EuroAmerican	— other flaked stone tools	— human	— metal
	— debitage	— unidentified bone	— FCR
	— ground/pecked stone	— floral	✓ other: wood

Additional information (e.g., temper, charcoal type, raw material, etc.):

SITE #: 21-AK0116

Site Name: Mississippi Landing Logging Pier

Field #:

Major Exotic Materials (*i.e.*, "exotic" relative to local area; ✓ all that apply):

- | | | |
|--------------------------------------------|----------------------------------------|------------------------------------------------|
| <input type="checkbox"/> catlinite | <input type="checkbox"/> native copper | <input type="checkbox"/> Hixton orthoquartzite |
| <input type="checkbox"/> Knife River Flint | <input type="checkbox"/> obsidian | <input type="checkbox"/> other: |

Diagnostic Type/Information (*e.g.*, Brainerd ceramics, machine-cut nails; describe decoration, function, manufacturer, etc.):

- Ceramic
Lithic
Glass
Metal
Other pilings protruding from the water and sonar images

Additional information:

ENVIRONMENTAL DATA

Major Drainage System

- | | | | |
|----------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------|------------------------------------------|
| <input type="checkbox"/> Cedar River | <input type="checkbox"/> Des Moines River | <input type="checkbox"/> Lake Superior | <input type="checkbox"/> Minnesota River |
| ✓ <input checked="" type="checkbox"/> Mississippi River (<i>N of MN River</i>) | <input type="checkbox"/> Red River | <input type="checkbox"/> Rainy River | |
| <input type="checkbox"/> Mississippi River (<i>S of MN River</i>) | <input type="checkbox"/> Missouri River | <input type="checkbox"/> St. Croix River | |

Watershed Index Map no. (MnDNR, Division of Waters, 1990): 9Distance to Existing Water Source (*per USGS topographic map, in feet or miles*): 0Ancient/Formal Water Feature (*name, type and distance to such feature*): Mississippi River, 0Topographic Setting (✓ all that apply):

- | <u>Upland</u> | <u>Riverine</u> | <u>Lacustrine</u> |
|----------------------------------------------|-----------------------------------------------------------------------------|---------------------------------------|
| <input type="checkbox"/> general upland | <input type="checkbox"/> alluvial fan | <input type="checkbox"/> inlet/outlet |
| <input type="checkbox"/> bluff edge | <input type="checkbox"/> terrace | <input type="checkbox"/> peninsula |
| <input type="checkbox"/> hilltop | ✓ <input checked="" type="checkbox"/> stream-stream junction | <input type="checkbox"/> island |
| <input type="checkbox"/> glacial beach ridge | <input type="checkbox"/> bluff-base | <input type="checkbox"/> isthmus |
| <input type="checkbox"/> wetland | <input type="checkbox"/> cave/rockshelter | <input type="checkbox"/> shoreline |
| <input type="checkbox"/> other: _____ | ✓ <input checked="" type="checkbox"/> other: <u>riverbank & channel</u> | <input type="checkbox"/> other: |

HISTORIC SITES ONLY:Historic setting: ☒ rural ☐ urban ☐ other:Type(s): ☐ industrial ☒ commercial ☐ domestic ☐ government ☐ other:

Historic transportation route (*e.g.*, road, waterway, rail); identify type, direction & distance: Mississippi River running in a general north-south direction near confluence of Swan River that runs generally northeast; one of the Swan River Logging Co. spurs that ran parallel to the logging pier ran generally to the northeast & met up with the Great Northern Railroad

OWNERSHIP INFORMATIONOwnership Type (✓ all that apply):

- ☐ federal ☒ state ☐ local ☐ tribal ☐ private ☐ unknown

Land Owner (*name and address*): State of Minnesota (Mississippi River bottom)

Significant historic owner(s) and period(s) of ownership, if known: Ammi Wright, Charles Davis, 1892 ~ 1908, possibly longer, of the Swan River Logging Co.; taken over by Hill City Railway Co. until 1917 or later

Year and Source of Ownership Information (*e.g.*, plat map, recorder's office, etc.): Hibbing Sentinel, May 21, 1898; Great Northern Railway Records, 1917, MNHS

SITE #: 21-AK0116

Site Name: Mississippi Landing Logging Pier

Field #:

INVESTIGATOR/REPORTER INFORMATIONType(s) of Investigation (✓ all that apply):✓ reconnaissance ✓ evaluation ✓ data recovery ✓ other: photographyMethods/techniques employed (% all that apply):

☐ informant report ☐ small diameter soil coring (. 1" diameter)
☐ surface survey ☐ geomorphological survey (*specify*):
☐ shovel testing ☐ geophysical survey (*specify*):
☐ excavation units 100% other(s): remote sensing: side-imaging sonar

Informant Name and Address: none

Artifact Repository (*name and accession nos.*): none

Report Citation: Mississippi River Aitkin County Survey, Maritime Heritage Minnesota, 2010

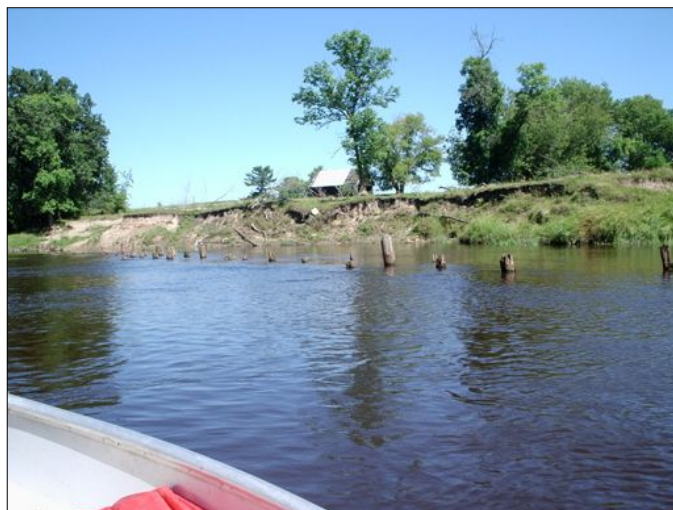
Major Bibliographic Reference(s) to Site:

Trunt, Leo, "Jacobson and the Story of Mississippi Landing 1890-1930" in *Prosper, Can You Tell Me More?*, Gateway Press, Inc., Baltimore, 1993.

Great Northern Railway Records, MNHS.

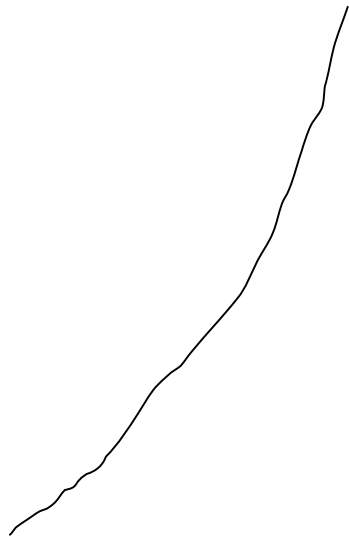
Principal Investigator (*name and affiliation*): Ann Merriman and Christopher Olson, Maritime Heritage Minnesota**ADDITIONAL NOTES** (*use space below or attach extra sheets, as needed*)

Remains of the Logging Pier, date unknown. From Trunt's *Prosper? Can You Tell Me More?*

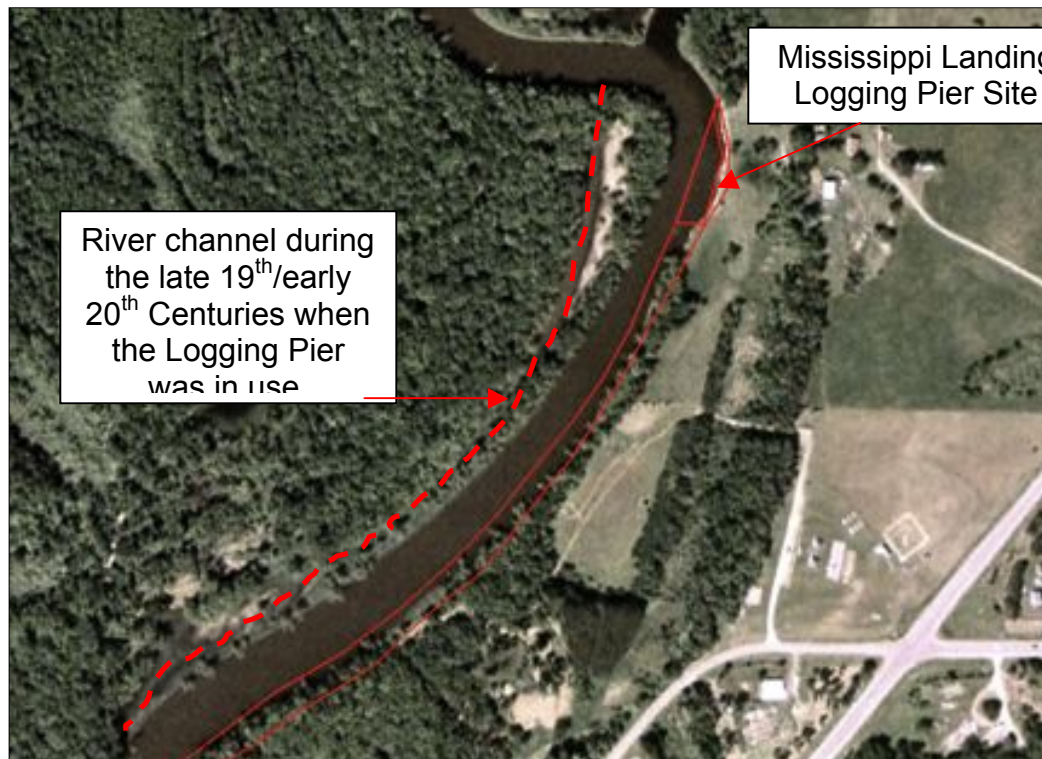
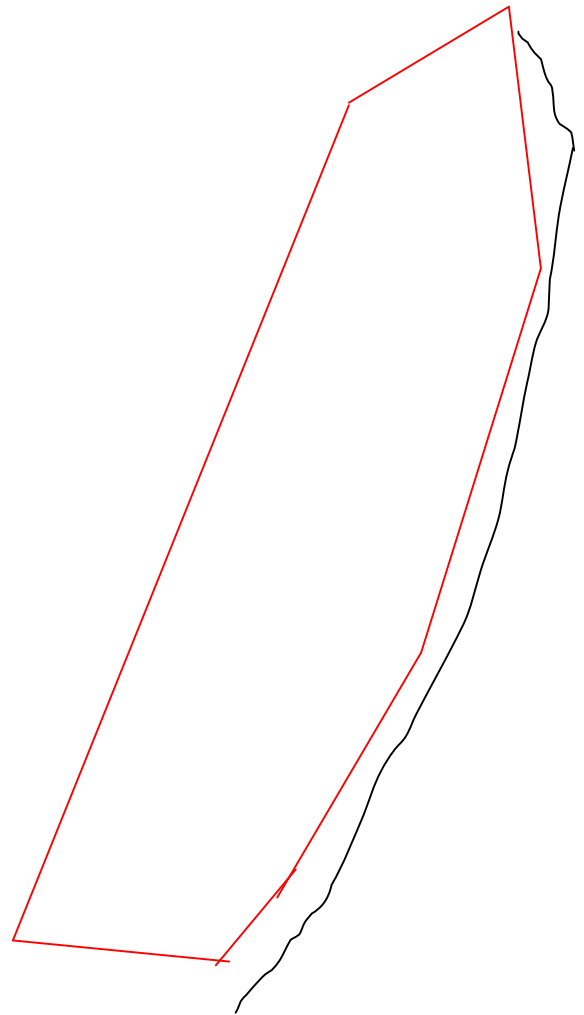


The visible portion of the site in August 2010.

MAPS (*attach USGS topographic quad and sketch map with site location outlined*)Form Completed by (*name and date*): Ann Merriman and Christopher Olson 11/24/2010



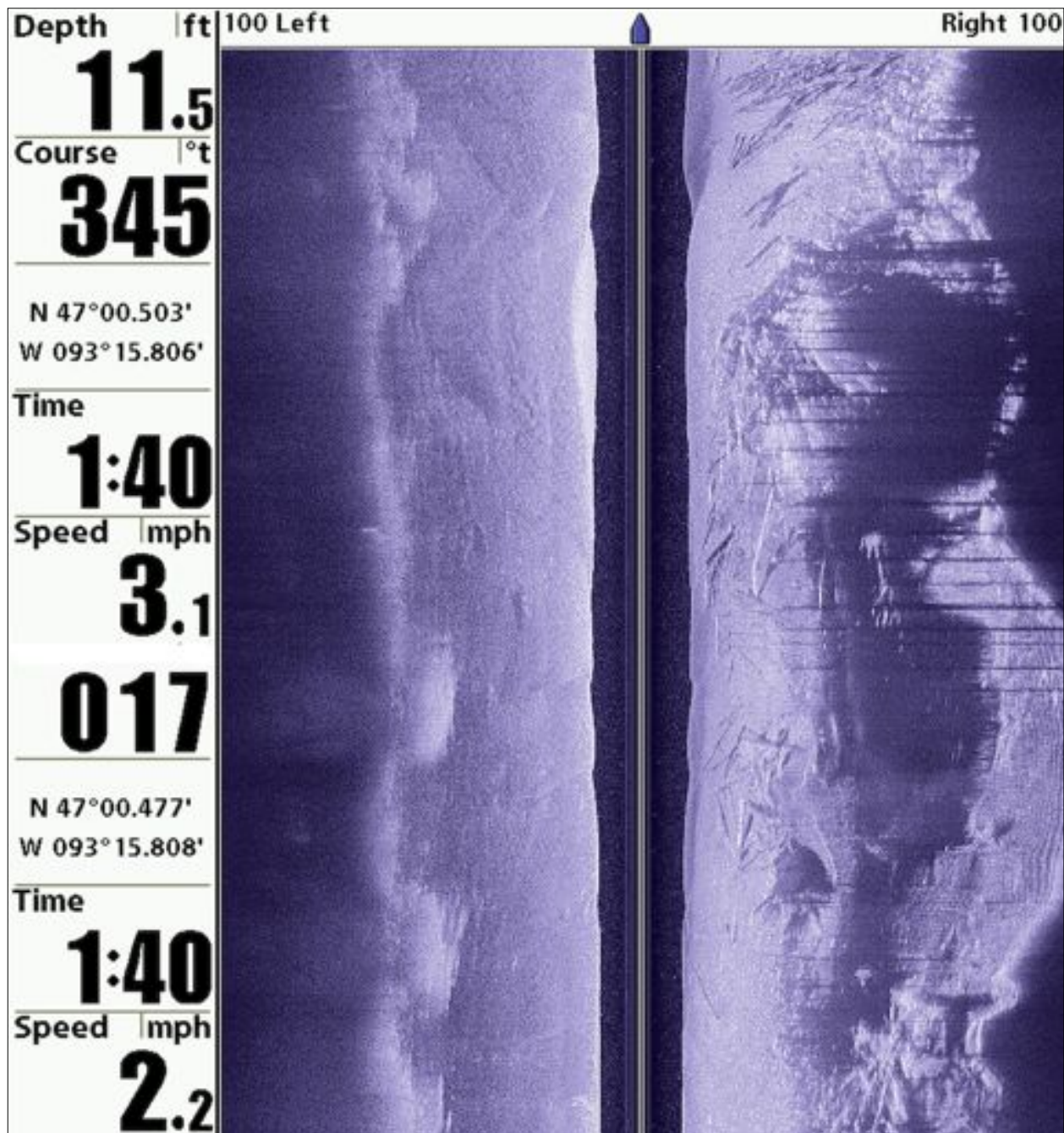
One row of pilings still protrudes above the surface of the water, but sonar images indicate there are more pilings protruding from the river bottom that cannot be seen during high water conditions.



Mississippi Landing
Logging Pier Site

River channel during
the late 19th/early
20th Centuries when
the Logging Pier
was in use

The long outline in red was where the complete Logging Pier was located, No underwater pilings are evident in the sonar recordings for the more southern part of the area. However, there are probably pilings in the river bank and further on shore, since there was also a railroad spur here as well.



Sonar image of the Mississippi Landing Logging Pier remains. The streaks leading off to the right are the shadows of pilings that are in the river channel. The irregularly-shaped object among the pilings is probably a tree, although it could be some large metal object, possibly remains of the railroad spur. Note the large tree at the bottom of the image on the right, including its shadow.

MINNESOTA ARCHAEOLOGICAL SITE FORM

OFFICE OF THE STATE ARCHAEOLOGIST

Fort Snelling History Center, St. Paul, MN 55111 (612) 725-2411

STATE HISTORIC PRESERVATION OFFICE

345 Kellogg Boulevard W., St. Paul, MN 55102 (612) 296-5434

OSA License #: 10-03, 10-04

SHPO RC #:

Date(s) of Fieldwork: August 22, 2010

☒ New Site☐ Site Update

SITE #: 21-AK0115

Site Name: Mississippi Landing Railroad Spur and Bridge Remains

Field #:

LOCATIONAL INFORMATION (*attach USGS topographic quad and sketch map with site location outlined*)

County: Aitkin

City/Twp. Name: Ball Bluff

SHPO Region:

USGS 7.5' Quadrangle Map (*name and year*): Jacobson 1966

Township: Ball Bluff Range: T 52 N R 23 W Section: 4

3 Sections (at least 2): NW 1/4, SE 1/2

Township: Ball Bluff Range: Section: 3 Sections (at least 2):

Township: Range: Section: 3 Sections (at least 2):

UTM Site Coordinates (*use 1927 datum; identify center point only*):

Zone 15

Easting 479835.11 m

Northing 5207451.27 m

Other locational information: As of August 2010, western-most section of the site was visible at the river bank on the northern edge of the Mississippi River and the eastern-most edge of the site was visible at the river bank on the eastern edge of the river. Part of the site is on land since the river's route has changed in the last 90 years or so, and the railroad bed for the Mississippi, Hill City, and Western Railway has been incorporated into a road.

SITE CHARACTERISTICS
Acreage: 2.7 Site Dimensions (*both horizontal and vertical/depth, in metric*): 490 m x 66 m (widest point) x 3 mFeatures (☒ *all that apply*): ☐ earthwork ☐ depression ☐ foundation ☒ other ☐ none

describe: Wooden pilings imbedded in the northern bank and eastern river bank are part of the Swan River Logging Company Railroad Spur. Wooden pilings imbedded in the river bottom and the eastern river bank are part of the Mississippi, Hill City, and Western Railway Swing Bridge.

Site Description (☒ *all that apply and describe*):☐ single artifact ☐ artifact scatter ☐ lithic scatter ☐ earthwork/mound☒ structural ruin ☐ rock alignment ☐ rock art ☐ cemetery/burial☐ standing structure (SHPO structure # if known): ☐ other:

describe: 27 or more pilings in the northern bank and 6 pilings imbedded in the eastern bank are the remains of one of the Swan River Logging Company's railroad spurs that would have supported a trestle. 12 or more pilings in 2 rows in the river channel and 4 pilings in the eastern river bank supported the Mississippi, Hill City and Western Railway Swing Bridge.

Inferred Site Function (*must specify*): The spur was used by the Company's trains that delivered logs to logging piers so they could be dumped into the Mississippi for "driving" down river. The bridge allowed travel from the eastern side of the Mississippi River at this point to Hill City.

Current Land Use (☒ *all that apply*):☐ cultivated ☐ woodland☐ fallow ☒ recreational☐ commercial☐ industrial☐ unknown☒ other: waterborne transportation☐ grassland☐ road☐ residential

Surface Visibility

☒ excellent (**above water**)☐ good☐ fair☒ poor (**underwater at river bottom**)☐ noneDegree of Disturbance (☒ *and describe*):☐ minimal☐ moderate☒ heavy☐ destroyed☐ unassessed*describe disturbance type(s)*: Pilings have been worn down/away from ice and water action

Current Threats to Site:

☐ erosion☐ development☐ agricultural☐ none known☒ other: ice, water, floating debris, watercraft

SITE #: 21-AK0115

Site Name: Mississippi Landing Railroad Spur and Bridge Remains

Field #:

CULTURAL/TEMPORAL AFFILIATION(✓ all that apply; include level of certainty: 1 = confirmed; 2 = probable):

Period: ☐ indeterminate ☐ Contact (1650-1837)
 ☐ Pre-Contact (9500 BC - 1650 AD) ☒ Post-Contact (1837-1945)

Pre-Contact Context: (if unable to discern specific context, ✓ here ☐)

PaleoIndian Tradition ☐ indeterminate ☐ Folsom ☐ Lanceolate Point
 ☐ Clovis ☐ Eastern Fluted ☐ other:

Archaic Tradition ☐ indeterminate ☐ Prairie ☐ Riverine
 ☐ Shield ☐ Lake-Forest ☐ other:

Woodland Tradition ☐ indeterminate ☐ Fox Lake ☐ Laurel
 ☐ Early ☐ Transitional ☐ Lake Benton
 ☐ Brainerd ☐ Kathio ☐ Psinomani/Sandy Lake
 ☐ Black Duck ☐ Havana Related ☐ Southeastern MN Late
 ☐ other:

Plains Village ☐ indeterminate ☐ Cambria ☐ other:
 ☐ Great Oasis ☐ Big Stone

Mississippian Tradition ☐ indeterminate ☐ Silvernale ☐ other:

Oneota Tradition ☐ indeterminate ☐ Blue Earth ☐ Orr ☐ other:

Contact Context: (if unable to discern specific context, ✓ here ☐)

American Indian ☐ indeterminate ☐ Eastern Dakota ☐ other:
 ☐ Ojibwe ☐ Western Dakota

EuroAmerican ☐ indeterminate ☐ British ☐ other: _____
 ☐ French ☐ Initial US

Post-Contact Context: (if unable to discern specific context, ✓ here ☐)

☐ Indian Communities & Reservations (1837-1934) ☐ St. Croix Triangle Lumbering (1830s-1900s)
☐ Early Agriculture & River Settlement (1840-1870) ☐ Railroads & Agricultural Development (1870-1940)
☒ Northern MN Lumbering (1870-1930s) ☐ Iron Ore Industry (1880s-1945)
☐ Tourism & Recreation (1870-1945) ☐ Urban Centers (1870-1940)

Dating Methods (✓ all that apply):

☐ artifact style/cross dating ☐ radiocarbon ☒ historic accounts ☐ Andreas atlas (1874)
☐ Sanborn maps (list years): _____ ☐ plat maps (list years): _____
☐ other(s) (specify):

Specify context dates (if radiometric, cite lab no. and uncalib. date; note if AMS): 1892 - 1935

MATERIALS PRESENTMaterial Classes (✓ all that apply):

<u>Ceramics</u>	<u>Lithics</u>	<u>Biological Remains</u>	<u>Other Materials</u>
<input type="checkbox"/> Aboriginal	<input type="checkbox"/> projectile points	<input type="checkbox"/> animal	<input type="checkbox"/> glass
<input type="checkbox"/> EuroAmerican	<input type="checkbox"/> other flaked stone tools	<input type="checkbox"/> human	<input type="checkbox"/> metal
	<input type="checkbox"/> debitage	<input type="checkbox"/> unidentified bone	<input type="checkbox"/> FCR
	<input type="checkbox"/> ground/pecked stone	<input type="checkbox"/> floral	<input checked="" type="checkbox"/> other: <u>wood</u>

Additional information (e.g., temper, charcoal type, raw material, etc.):

SITE #: 21-AK0115

Site Name: Mississippi Landing Railroad Spur and Bridge Remains

Field #:

Major Exotic Materials (*i.e.*, "exotic" relative to local area; ✓ all that apply):

- | | | |
|--------------------------------------------|----------------------------------------|------------------------------------------------|
| <input type="checkbox"/> catlinite | <input type="checkbox"/> native copper | <input type="checkbox"/> Hixton orthoquartzite |
| <input type="checkbox"/> Knife River Flint | <input type="checkbox"/> obsidian | <input type="checkbox"/> other: |

Diagnostic Type/Information (*e.g.*, Brainerd ceramics, machine-cut nails; describe decoration, function, manufacturer, etc.):

- Ceramic
Lithic
Glass
Metal
Other pilings sticking out of water and river bank; sonar images

Additional information:

ENVIRONMENTAL DATA

Major Drainage System

- | | | | |
|----------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------|------------------------------------------|
| <input type="checkbox"/> Cedar River | <input type="checkbox"/> Des Moines River | <input type="checkbox"/> Lake Superior | <input type="checkbox"/> Minnesota River |
| ✓ <input checked="" type="checkbox"/> Mississippi River (<i>N of MN River</i>) | <input type="checkbox"/> Red River | <input type="checkbox"/> Rainy River | |
| <input type="checkbox"/> Mississippi River (<i>S of MN River</i>) | <input type="checkbox"/> Missouri River | <input type="checkbox"/> St. Croix River | |

Watershed Index Map no. (MnDNR, Division of Waters, 1990): 9Distance to Existing Water Source (*per USGS topographic map, in feet or miles*): 0Ancient/Formal Water Feature (*name, type and distance to such feature*): Mississippi River, 0Topographic Setting (✓ all that apply):

- | <u>Upland</u> | <u>Riverine</u> | <u>Lacustrine</u> |
|----------------------------------------------|---------------------------------------------------------------|---------------------------------------|
| <input type="checkbox"/> general upland | <input type="checkbox"/> alluvial fan | <input type="checkbox"/> inlet/outlet |
| <input type="checkbox"/> bluff edge | <input type="checkbox"/> terrace | <input type="checkbox"/> peninsula |
| <input type="checkbox"/> hilltop | <input type="checkbox"/> stream-stream junction | <input type="checkbox"/> island |
| <input type="checkbox"/> glacial beach ridge | <input type="checkbox"/> bluff-base | <input type="checkbox"/> isthmus |
| <input type="checkbox"/> wetland | <input type="checkbox"/> cave/rockshelter | <input type="checkbox"/> shoreline |
| <input type="checkbox"/> other: _____ | ✓ <input checked="" type="checkbox"/> other: <u>riverbank</u> | <input type="checkbox"/> other: |

HISTORIC SITES ONLY:Historic setting: ☒ rural ☐ urban ☐ other:Type(s): ☐ industrial ☒ commercial ☐ domestic ☐ government ☐ other:Historic transportation route (*e.g.*, road, waterway, rail); identify type, direction & distance: Mississippi River running in a general north-south direction; this spur met up with the Great Northern Railroad**OWNERSHIP INFORMATION**Ownership Type (✓ all that apply):

- | | | | | | |
|----------------------------------|---------------------------------------------|--------------------------------|---------------------------------|----------------------------------|----------------------------------|
| <input type="checkbox"/> federal | ✓ <input checked="" type="checkbox"/> state | <input type="checkbox"/> local | <input type="checkbox"/> tribal | <input type="checkbox"/> private | <input type="checkbox"/> unknown |
|----------------------------------|---------------------------------------------|--------------------------------|---------------------------------|----------------------------------|----------------------------------|

Land Owner (*name and address*): State of Minnesota (Mississippi River bottom and river bank)

Significant historic owner(s) and period(s) of ownership, if known: Ammi Wright, Charles Davis, 1892 ~ 1908, possibly longer, of the Swan River Logging Co.; MHCWR, 1908-1915; Hill City Railway 1915-1935 – a subsidiary of the Great Northern Railroad

Year and Source of Ownership Information (*e.g.*, plat map, recorder's office, etc.): Hibbing Sentinel, May 21, 1898; Trains Magazine Online Forum: Mississippi River Crossings, 2005

SITE #: 21-AK0115

Site Name: Mississippi Landing Railroad Spur and Bridge Remains

Field #:

INVESTIGATOR/REPORTER INFORMATION✓ reconnaissance ✓ evaluation ✓ data recovery ✓ other: photographyMethods/techniques employed (% all that apply):

☐ informant report ☐ small diameter soil coring (. 1" diameter)
☐ surface survey ☐ geomorphological survey (*specify*):
☐ shovel testing ☐ geophysical survey (*specify*):
☐ excavation units 100% other(s): side-imaging sonar

Informant Name and Address: none

Artifact Repository (*name and accession nos.*): none

Report Citation: Mississippi River Aitkin County Survey, Maritime Heritage Minnesota, 2010.

Major Bibliographic Reference(s) to Site:

Trunt, Leo, "Jacobson and the Story of Mississippi Landing 1890-1930" in *Prosper, Can You Tell Me More?*, Gateway Press, Inc., Baltimore, 1993.

Trunt, Leo, "The Village of Rabey" in *Beyond the Circle*, Gateway Press, Inc., Baltimore, 1998.

Principal Investigator (*name and affiliation*): Ann Merriman and Christopher Olson, Maritime Heritage Minnesota**ADDITIONAL NOTES** (*use space below or attach extra sheets, as needed*)

Pilings at the north bank of the river at the site's western-most end are part of the Swan River Logging Company's Railroad Trestle.

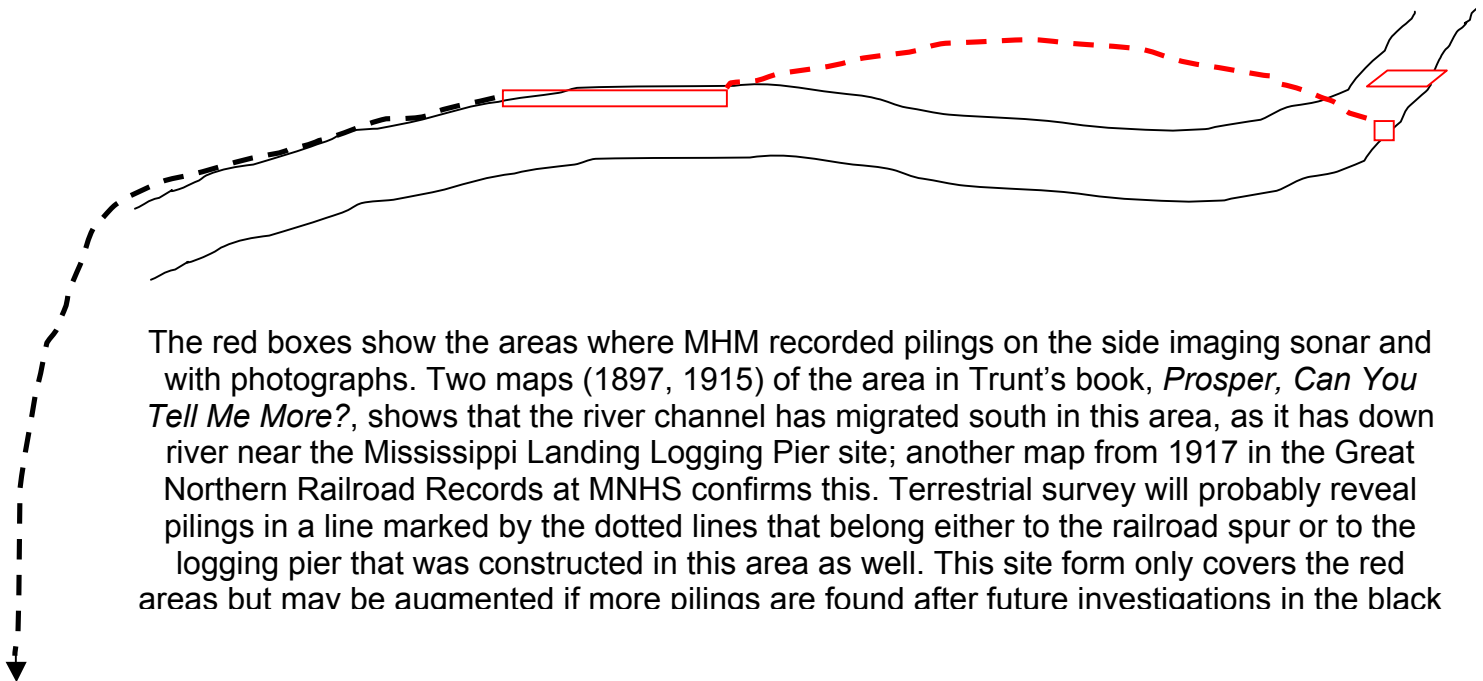


Pilings at the east bank of the river – the northern-most pilings are supports for the Mississippi, Hill City, & Western Railway Swing Bridge, and the southern pilings are supports for the Swan River Logging Company's river crossing; the exact nature of the crossing is uncertain.



Left: Two rows of support pilings for the Mississippi, Hill City & Western Railway Swing Bridge in the river channel. More pilings, not visible, are underwater.

MAPS (*attach USGS topographic quad and sketch map with site location outlined*)Form Completed by (*name and date*): Ann Merriman and Christopher Olson 11/23/2010



References

- Hart, Irving H. 1952. Steamboating on Mississippi Headwaters. *Minnesota History*, XXXIII (Spring): 7–19.
- Sanford, Mrs. Robert N. 1948. Letter from Palisade, MN, to Prof. I. H. Hart, McGregor, MN, 24 October. Typed copy. Irving Hart Letters Received, 1928, 1948. Manuscript Collection, Minnesota Historical Society, St. Paul.
- Schroeder, Mrs. John. 1948. Letter from Aitkin, MN, to Prof. I. H. Hart, McGregor, MN, 3 September. Typed copy. Irving Hart Letters Received, 1928, 1948. Manuscript Collection, Minnesota Historical Society, St. Paul.
- Trunt, Leo. 1993. *Prosper, Can You Tell Me More?*, Gateway Press, Inc., Baltimore.